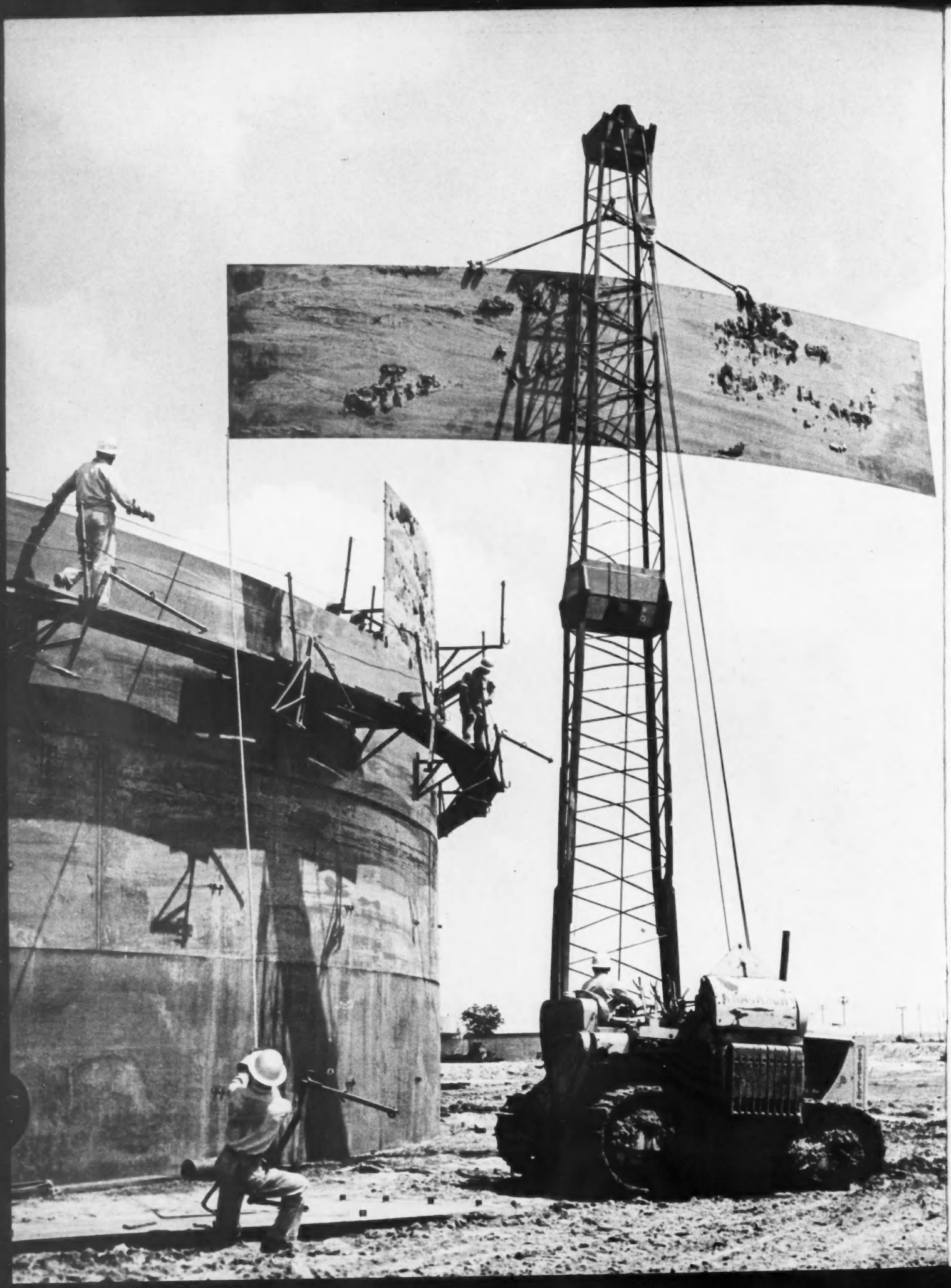
Pipe Stills at Baytown — *E. M. Schiwetz*

The HUMBLE WAY

JULY-AUGUST, 1951



The HUMBLE WAY
JULY-AUGUST, 1951
VOL. VII No. 2

Mid-Year Report to Stockholders

Humble stockholders received about the middle of August the following interim report on the Company's operations for the first six months of the year:

Humble's operations, net income, and taxes in the first half of 1951 showed an increase over the second half of 1950, but the gain was less than that between the first and second half of 1950. Comparisons with a year ago are subject to the qualification that operations then were relatively low because of circumstances described in the interim report of August 10, 1950.

Net income per share of common stock was $4.97 in the first half of 1951, compared with $4.20 in the preceding six months. Included in this year's income was a nonrecurring profit of $1,613,000 from the sale of Humble's interest in Bayou Pipe Line.

Financial results for the latter part of 1951 are subject to a number of uncertainties which warrant a note of caution against the conclusion that second half earnings will equal those of the first six months. These uncertainties include the possibility of higher income tax rates under a bill now being considered by Congress, an expected increase in dry hole costs, and decreases in production if supply continues to exceed demand.

Capital expenditures in 1951 have been at a rate 30 percent higher than last year, and a further increase is anticipated in carrying out the scheduled drilling program. The increase in capital expenditures has resulted principally from more drilling and lease purchases.

Well completions by Humble in the first six months were 489, compared with 441 in the last half of 1950.

Dividends continued to be paid at the rate of $1.00 a share each quarter, the same as in 1950.

	1950			1951
	First Half	Second Half	Year	First Half
FINANCIAL DATA				
Gross Operating Income	$355,141,900	$438,275,900	$793,417,800	$461,520,300
Net Income	53,856,800	75,503,200	129,360,000	89,313,500*
Taxes**	22,798,400	37,720,700	60,519,100	38,356,200**
Dividends Paid	35,951,360	35,951,360	71,902,720	35,951,360
Capital Expenditures	55,055,000	55,435,600	110,490,600	70,559,100
Net Income Per Share	$3.00	$4.20	$7.20	$4.97
Dividends Per Share	$2.00	$2.00	$4.00	$2.00
OPERATING VOLUMES—Barrels Daily				
Net Crude Oil Production	251,300	313,200	282,500	338,000
Crude Oil Refined	200,200	243,500	222,000	244,300
Trunk Line Deliveries	529,100	659,900	595,100	737,100
WELLS DRILLED BY HUMBLE				
Producing	296	373	669	380
Dry	79	68	147	109

The interim financial data are subject to change by final audit for the year.
* Includes a nonrecurring profit of $1,613,000 from the sale of Humble Pipe Line Company's interest in Bayou Pipe Line.
** Federal income taxes for the first half of 1950 computed at a 38% rate; taxes for the last half of 1950 determined by computing the tax for the entire year at a 42% rate and deducting the amount accrued in the first half; taxes for the first half of 1951 computed at a 47% rate.

Workmen hoist plate into position on crude oil storage tank under construction at Humble Pipe Line Company's Satsuma Station.

IF SICKNESS COMES

Company benefit plans give financial protection against short or long illness and permanent total disability

A COOL afternoon breeze was blowing in from the south. Sam and Martha Perkins sat relaxed on the front porch of the pumper's cottage; in the yard out front the children played boisterously with Flip, the family dog.

Out of the small talk they were exchanging during the first few minutes after he came in from the field, Martha suddenly said: "Oh yes, I was in town this afternoon and dropped by the hospital to visit Mr. Stone."

"How's he feeling?" Sam inquired.

"Guess he's improving some . . . but I can't help but worry about him . . . and about Mrs. Stone and the two boys. I could tell, she's awfully uneasy."

Sam sat silently for a minute or more, looking out at the setting sun.

"You know, I was just thinking: the Stones are lucky in a way," Sam said.

"Lucky? How can you say such a thing when Mr. Stone's been in bed with that ailment for three weeks already . . . and nobody knows when he will be able to be up and about?" Martha simply couldn't understand her husband's comment.

"What I mean," he went on, "is that they're lucky Stone is an old timer with Humble—instead of being on his own or with some company that doesn't have what we have in the way of employee benefits. Sure, I know they have plenty to worry about. But at least Mrs. Stone doesn't have the money worries that usually go with sickness."

"You're always thinking about the money end of everything," Martha exclaimed. "Sometimes you worry me."

"A man's got to think about money," he replied with a wry smile. "Let me tell you why I said that. When I dropped by to visit Bert Stone more than a week ago, you know the first thing he said to me? 'Sam,' he whispered sort of painfully, 'I'm gonna' pull through this . . . might take a while, but I feel I can lick it. Sure am glad for the family's sake the Company has this sickness benefit plan.'

"So you see, Martha, that's why I made that remark about the Stones being lucky."

"Oh I know that the hospitalization insurance will take care of a big part of the expenses, but what if Mr. Stone doesn't get back to work for a long time?" Martha's anxiety was real. Over the weeks she had tried to see herself in Mrs. Stone's place and it had given rise to some brow-knitting thoughts.

"That's the part I want you to know more about," Sam said as he started into the house. "Wait a minute while I get a booklet out of my chest drawer. I want to show you something." The screen door closed and Martha Perkins was left with her thoughts. She was so perturbed at the moment she doubted that her husband could tell or show her anything of a quieting nature. Hers was the womanly understanding of trouble; men simply didn't feel such trials as keenly, she told herself.

"You remember some weeks ago we talked about our estate,"* Sam reminded on his return. "You felt it all sounded complicated when we started. But you understood when we finished. Now I want to explain the Company's sickness benefits."

He began by saying that these benefits were scaled like most Humble benefits—on length of service. "As soon as an employee has finished a year with Humble he is eligible for sickness benefits. If he gets sick any time after that first year his check keeps on coming according to a set schedule. Of course the Company expects us to get proper medical attention when we are sick."

Here Sam began thumbing the booklet he had in hand. "This is the schedule of benefits, Martha. You see as the years of service increase the benefits increase."

Martha was surprised. "That's something I didn't know about. I was thinking only about the hospitalization insurance policy . . . this makes my heart glad for the Stones. But how much will this actually mean to them?"

"Stone has been with the Company something like 23 years," Sam Perkins estimated. "That puts him in this last bracket where he would get 12 weeks

* *"Security Through Individual Planning."* March-April, 1951, HUMBLE WAY.

SCHEDULE OF SICKNESS BENEFITS

Years of service as of governing date	Maximum number of weeks of benefits based on normal earnings	Maximum benefits to be paid at full pay and at half pay based on normal earnings
1	6	
2	11	First month at full pay—
3	16	balance at half pay
4	21	
5	26	
6	31	First 8 weeks at full pay—
7	36	balance at half pay
8	41	
9	46	
10	52	First 12 weeks at full pay— balance at half pay

at full pay and the balance of a year (or 40 more weeks) at half pay if he should continue to be disabled.

"You mean that Mr. Stone will have this sickness benefit income for a whole year, if he can't go back to work before then?"

"That's right," Sam replied, "and even beyond that if it takes more than a year for him to get well. The Plan also provides for special sickness benefits for a maximum of two additional years for employees with 10 or more years of service."

"No wonder you were so anxious to show this to me. It does ease my mind a lot. For Mrs. Stone's sake I'm pleased to learn about this," she sighed.

For a few minutes the couple talked about the benefit program, about their wishes for a fast and complete recovery for Bert Stone, about how Humble plans applied to them. Sam kept the conversation going. He felt he had put the thought of security in time of sickness across to his wife, but he was not through. He had still another phase of the program to explain.

During a lull in the discussion he chose to bring the subject in. "Now Martha, though I hope they'll not need it, let's look at what might be in store for them if Bert pulls through but is never able to go back to work."

"Heaven forbid," she exclaimed.

"I hope as strongly as you that it doesn't happen. Bert Stone has been an active man and would find it hard to take. But let's see how he would be cared for if such a bad break should come. Humble has provided for such cases through the permanent total and disability plan," Sam said.

Martha broke in: "Though I hate to think about it, I suppose I should know something about this part of the plan, too."

Sam was paging through the little booklet. "As I recall, Bert Stone is 50. He's been with Humble for a little more than 23 years, so that makes him eligible I think . . . Yeah, anybody with more than 15 years who is totally and permanently disabled is eligible according to the chart here. And with Company approval he may receive before reaching age 65 (women 55) a retirement income equal to his undiscounted annuities payable at normal retirement age or the following percentage of his monthly pay, whichever is greater."

Years of Credited Service	Percentage of Salary
15 or more but less than 20	37½
20 or more but less than 25	40
25 or more but less than 30	42½
30 or more but less than 35	45
35 or more but less than 40	47½
40 or more	50

It was apparent to Sam that his wife didn't understand, so he continued. "I was told in a meeting the other day that this schedule applies in most cases, so let's assume it applies to Bert. He falls into the '20 or more but less than 25' group. That means he may receive 40 per cent of his normal monthly pay until age 65." Then Sam did some figuring. He didn't know Bert Stone's monthly pay, but estimated that as a roustabout gang pusher it was probably in the neighborhood of $410 a month. Forty per cent of that would give him around $165-a-month income, Sam calculated.

"Some of that would be from the annuity plans and the rest from the permanent and total disability plan. But where it comes from isn't as important as the fact that it would be payable regularly," he announced.

"Any additional income under other Company Plans?" Martha asked.

"Yes, under the Group Life Insurance Plan he has $7,500 coverage. An important part of this plan is that it pays monthly benefits to employees who are declared by the insurance company to be totally and permanently disabled before age 60 (women 55). Since Bert is under 60, he would get $75 a month for a maximum of 50 months. Then, half of his insurance would have been paid. That part of the $7,500 not paid Bert before his death would be kept in force without payment of premium and would be payable to his beneficiary," Sam explained.

"All of this isn't a high income, but it is good to know it would be regular," Martha proclaimed. "You keep mentioning age 65. What would happen then? Would all income stop?"

"Oh no. What he would get from the Company, plus Social Security would add up to about $175 a month," Sam announced after referring to the booklet and doing a little more figuring.

"You mean then, so long as he lived he would have an income. Is that right, Sam?"

"Exactly. And what's more, if he should die at any time, his beneficiaries (Mrs. Stone, or the minor children if she had died before him) would receive the survivor benefits we talked about before. These benefits are in addition to the group life insurance we talked about a while ago and are based on length of service. In Bert Stone's case, since he would have been retired, his wife would receive monthly installments of ⅜ of a normal month's pay, less any widow's benefit paid under the Social Security Act," Sam said.

He ran his forefinger down the chart again. "The book here shows that these payments would be for 34 months for the first 15 years of service and one month for each additional year. That would mean for 42 months after his death his beneficiaries would get ⅜ of his normal pay at the time he became inactive, less the Social Security payment. In Bert's case ⅜ pay would be about $154 a month and the widow's benefit from Social Security would be about $41 a month until his younger son, Bob, reaches age 18, leaving a survivor benefit of about $113 a month to be paid by Humble until 42 installments had been paid."

"Gosh," Martha said, "once again I have to thank you for making me listen and learn. I feel much better about the Stones, and about us, too, if anything should ever happen to you."

Sam Perkins, too, was feeling good all over. The review of these matters for his wife's sake had refreshed him considerably on the plans. He felt particularly good about having studied the plans and asked questions in meetings so that he knew them well enough to give others at least an insight into the important phases of benefit plans.

"There's just one thing more. This time," said Sam, "I want to ask you a question. Do you have any idea what all this protection would cost us if we were to try and buy it for ourselves?"

"Why no, Sam. Could you buy it at all?"

"Probably couldn't buy just such a plan. And I don't know what it would cost, but I've heard mention in meetings that it would be several hundred dollars a year. As it is, the Company sickness and survivor benefits plans cost us nothing," Sam concluded.

"As I've said many times before, I'm happy, Sam, that we cast our lot with Humble."

"So am I," Sam added.

HOLDING *WILD* ONES

Today's Equipment Keeps a Tight Rein on High Pressure Wells, and Blowouts Are Almost a Thing of the Past

Packing the power of a pint-sized tornado, blowouts can wreak a full measure of havoc. This one tumbled pipe about like jackstraws and dumped a heavy truck on its side. To cap this wild well and restore control took four days.

BACK in the days before Old Dobbin was shunted from the highways by the gasoline buggy, the village blacksmith had one sure way of curbing the horse which became unruly while being shod. He slipped a twist—a stick with a small rope loop at one end—over the horse's nose. A turn or two and the horse became gentle and tractable.

The horseshoer and the driller for oil are brothers under the skin. If a driller has been in the business for long, he has probably at one time had a well start to kick beneath him—and he will tell you that if one runs wild it has the violent power of a thousand mustangs.

In the glossary of oil, a well on rampage is called a *blowout*. It is a serious mishap—one that used to play hob with safety records and take a high toll of equipment. The driller of today, however, has a mechanical twist of his own—the blowout preventer—which can discourage the most rambunctious wells from running amuck. It helps hold the wild ones.

A blowout is just what its name implies. When high pressure fluids or gases are struck, they thrust upward with tremendous force. This energy, if unrestrained, can perform prodigious feats. With sand as its emery, it can slice through pipe fittings. It can level a derrick. It can wrench loose the casing and send it careening from the hole.

Fortunately, an effective primary control is at hand today in modern drilling fluids. With properly weighted mud circulating down the drill pipe, through the bit, and back up to the wellhead, all but the most recalcitrant pressures can be kept in check.

Backing up this first line of defense, should the pressures break into the secondary, is that time-tested piece of safety equipment, the blowout preventer.

The blowout preventer is simply a mechanical means for closing off the annulus, or ring of space, between casing and drill pipe, thus sealing in underground pressures until primary control can be restored with weighted mud. Variations on this inventive theme have been numerous: Since 1882, when the first blowout preventer was patented, inventors with a better-mousetrap philosophy have patented more than 10,000 devices aimed at doing the job better.

But no safety chain, of course, is any stronger than its human links. A large share of credit—the largest, perhaps—goes to the drilling crews who know their techniques and equipment and who use them wisely and well.

Mud and the preventer—and precision performance by well-trained crews. There you have the three-ply reason behind the lessening of the blowout problem, the reason why a rig may now work for years in the lower depths and never experience the primitive fury of a blowout.

In oil's early days, it was a different story. As bits probed deeper and deeper, high pressure formations were often hard to handle with the drilling technology then available, and blowouts were much more common. This was particularly true of wildcat wells, where the drillers explored new geologic horizons and fierce pressures sometimes lay in ambush.

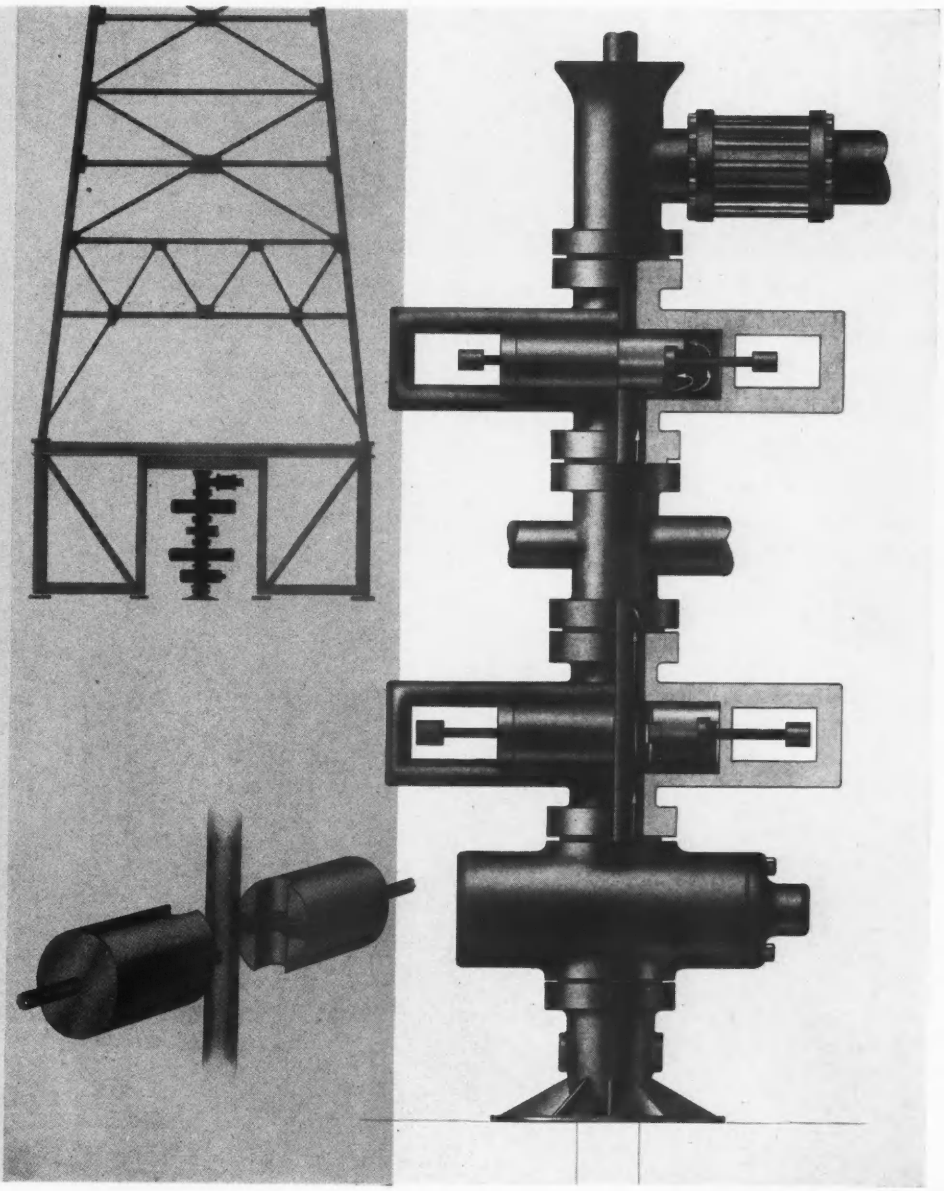
On occasion blowouts happened fast, but almost always there were storm signals which warned the crew to start battening down the hatches. The well would begin spitting mud. If the spray

Blowouts have almost gone the way of wooden derricks and doodle-bug geology. Runaway pressures give trouble today in less than one per cent of the wells drilled. But standing guard on every rig—just in case—is the blowout preventer assembly.

In the center panel is outlined a typical assembly to show its relation to the derrick. The preventers are usually hooked up in pairs, one above the other, in the derrick cellar. Flanged to the casing, they can shut off the ring of space between casing and drill pipe with tight-fitting rams like those shown below.

The outside panel gives in more detail a schematic drawing of the blowout preventer assembly. Starting from below are a master gate valve, the bottom blowout preventer, a flanged tee with flow lines leading off, the top blowout preventer, and a bell nipple with another flow line.

Shown in heavy blue is the well pressure. Here it surges through the bottom preventer, which is open, and is stopped by the closed rams of the top preventer. The well pressure is acting against the back surface of the rams to help seal them around the drill pipe.



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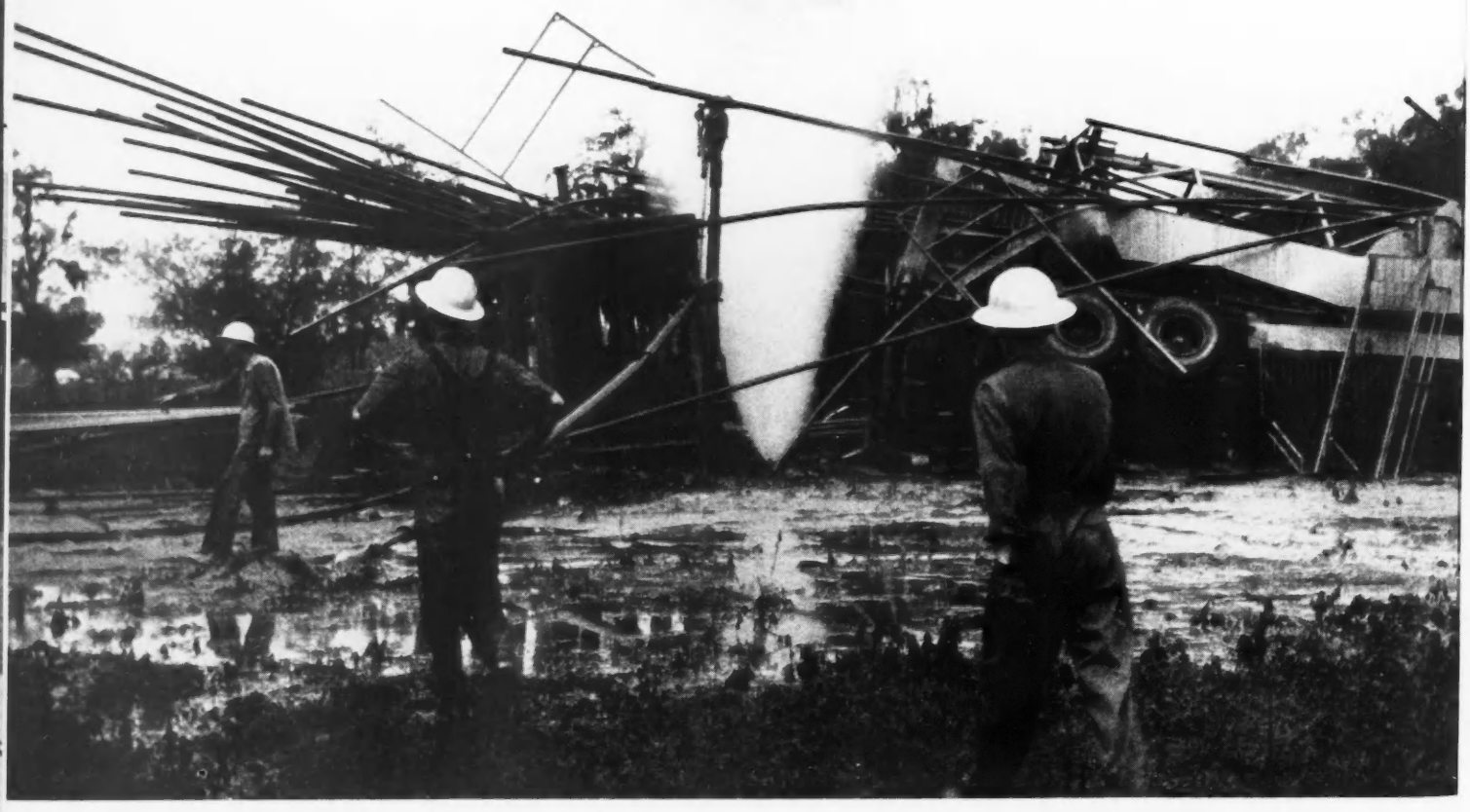

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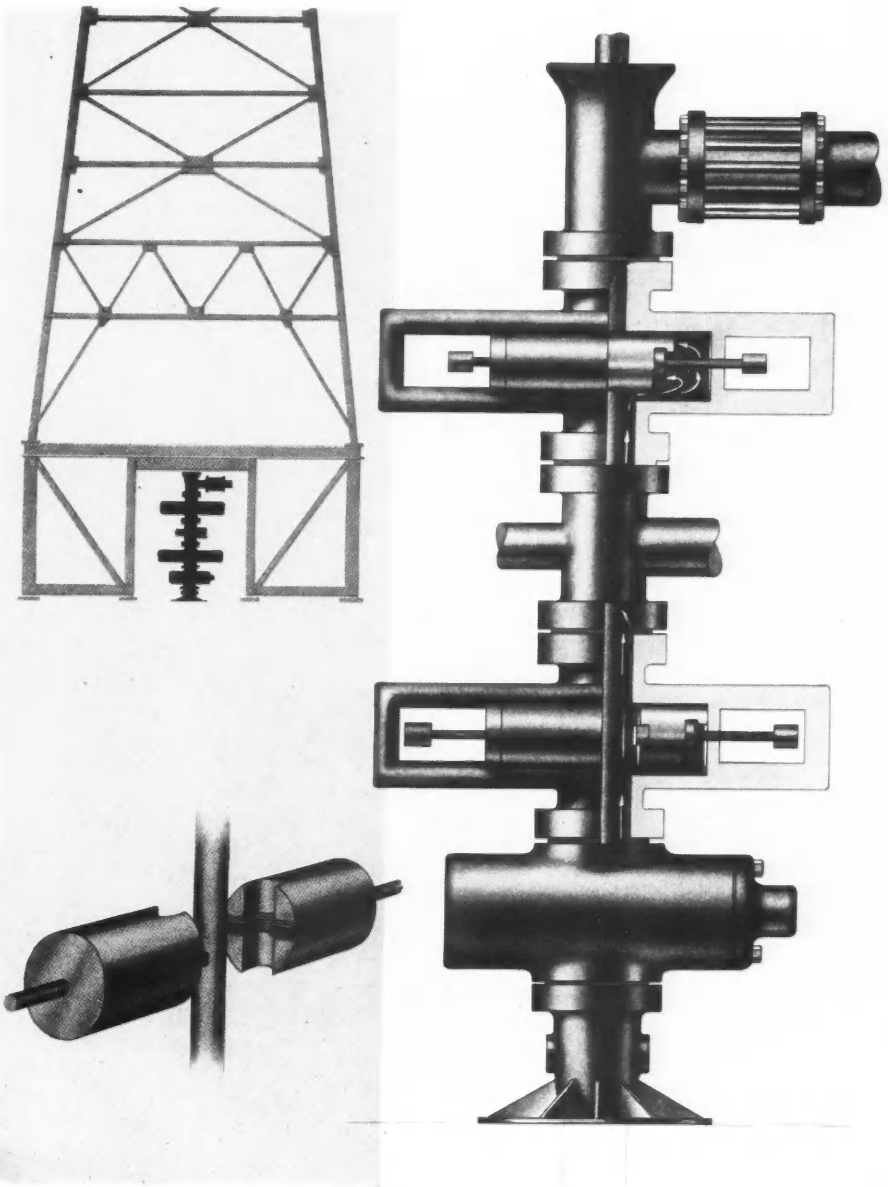
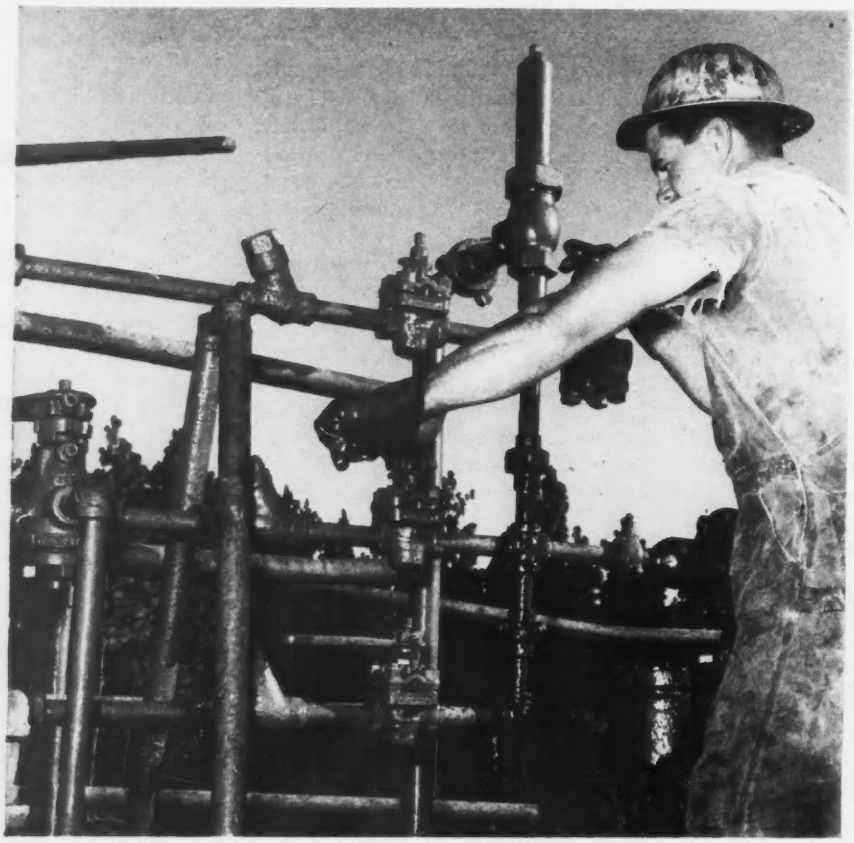
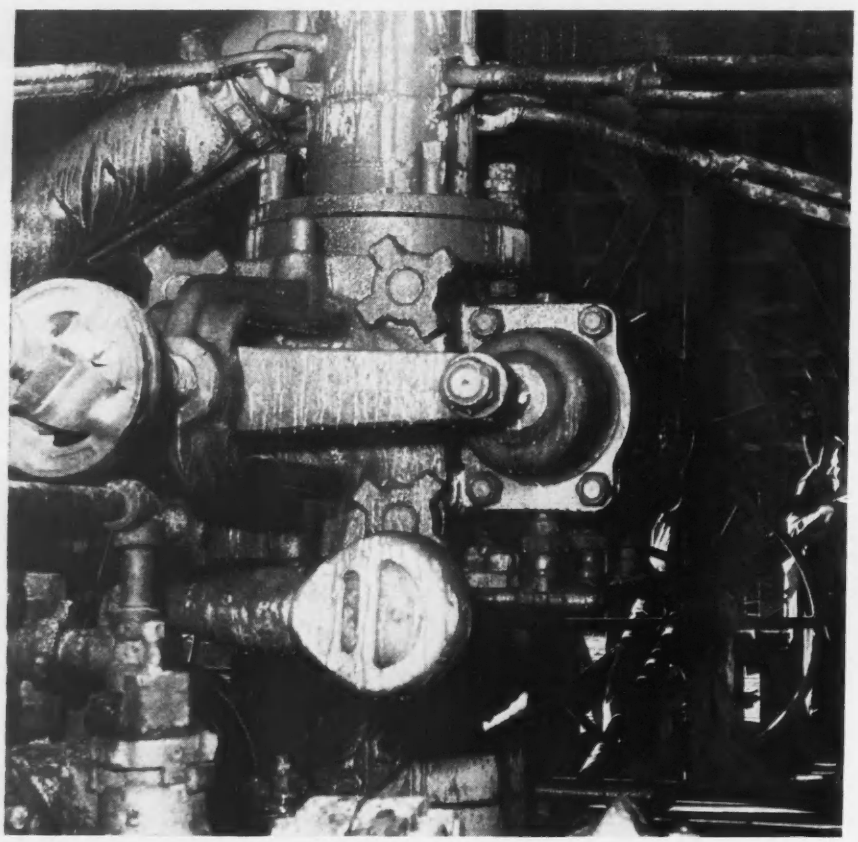




Close at hand on derrick floor is a valve which, when opened, provides enough hydraulic pressure to ram shut the blowout preventer in a matter of seconds. Below, dripping with moisture in the derrick cellar, is one of the two blowout preventers.



soared high, the crew was often showered with muck. But no matter how bedraggled their state, the driller and his crew moved fast to nip off the riotous pressures. When remedial measures failed, the crew had a blowout on its hands—and a wild well.

A wild well meant a passel of trouble. As a gusher, it could spill out thousands of barrels of oil, much of it to be lost by seepage or evaporation. On fire, it was an upstairs hades. At its worst, it could crater and literally swallow an entire rig.

It was an awesome sight indeed, the wild well, and it seems to have made an inventor out of many a man. At any rate, minds supercharged with the adrenalin of catastrophe tackled the problem, and inventions to quell blowouts began rolling from the oilfields in assembly-line quantities.

In the vanguard of this army of inventors was a man named M. A. Lanagan. On November 21, 1882, with his patent on a "safety attachment for oil wells and tanks," he undertook an epochal sortie against the blowout menace. It was the first known step in another of America's long and many-columned marches towards industrial progress.

Designed for cable-tool rigs, Mr. Lanagan's invention was a relatively simple means of shearing the drilling cable and sealing off the hole. Its basic principles, however, are as good today as they were some 70 years ago.

"If the flow of oil or gas from the well can be quickly stopped or diverted," the letters patent declared, "it is a comparatively easy matter to arrest their progress." Also listed were other desirable traits: "An apparatus which can also be handled easily and expeditiously at a safe distance from the well . . . An apparatus which, when not in use, will not interfere with the boring of the well . . . but which, when the occasion required, can be instantly operated from a safe distance."

The increased use—and eventual dominance—of rotary drilling multiplied the problems of mechanical blowout prevention. Here there could be no simple gate valve gimmick to slam shut on the entire hole. Now you had to close the ring of space between the casing and the drill stem. It was a job roughly comparable to putting the stopper on a bottle from which a pencil protrudes like a derisive tongue.

Alert as the helmsman on a windjammer, a member of the drilling crew stands ready to test the giant wheel which is used for closing blowout preventer manually.

Many and ingenious were the ways evolved to do this. Down through the years, however, most blowout preventers have fallen into one of the two main groups: the ram type and the packer type.

Cut a small doughnut in two, ram the halves together around the pencil at the bottleneck, and you will have an idea of how the ram-type preventer works. Using packer methods, you would seal the bottleneck by squeezing dough around the pencil.

Blowout preventers are, of course, considerably more complicated than that. To handle pressures in excess of 5,000 pounds per square inch, they have to be. The preventer encases a close-tolerance mechanism where strength must be combined with ease of operation, and it may be as bulky as a side of beef and as costly as a fish-tailed convertible.

The preventer is attached to the casing under the derrick floor. If danger threatens, it may be closed manually or by pressure (air or fluid). The two piston-shaped rams close in on the drill pipe, each lapping half way around to meet the other half and form a seal. Or, in the other type, pressure is applied to a puff-sleeved rubber packer to squeeze it tight against the pipe. Some preventers divert to ram or packer the would-be blowout's own energy and use this to help maintain a seal.

On most wells, blowout preventers stand guard in stacks of two or three. This way—with the preventers installed in series—repairs can be made, rams or packers can be changed, all without endangering crew or rig. It provides an extra margin of safety.

Let's watch a blowout preventer go into action. The well has developed a strong mud kick. Slush is spurting over the whole shebang. Obviously some runaway pressure is lunging to the surface: there is the danger of a blowout. That is when the driller gives the order to close the blowout preventer. He needs a little time to bring the well under control with heavier mud.

The crew, as it has done many times before during blowout practice sessions, carries out the assignment with few lost motions. The top preventer is closed, and some of the pressure may be bled off through choked flow lines connected just below the upper preventer. Meanwhile, the crew whips up a heavier mud, pumps it into the hole. The skittish well is soon under control, and work is resumed.

With the crew, of course, lies the key to a successful operation of this kind. To ensure that every man knows what to do in an emergency, daily blowout drills are held. These were first started in 1925, and one company has credited the drills with reducing its blowout losses by 90 percent. As part of the routine, the crew closes the preventers, tests them under pressure.

There are oil pioneers still living who probably would have traded years of life for our modern equipment and know-how. They blazed hazardous trails, and many learned at first hand to respect the destructive power of a blowout.

A blowout used to spell much trouble, and it still does. The big difference is this: Today blowouts and wild wells are the rare exception instead of the frequent rule. For this happy ending, we can thank the oil industry's never-ending research, its progressive technology, and its keenly-trained crews.

We can thank, too, a rugged bit of equipment called the blowout preventer.

Battery W, one of the outmoded shell stills which have been retired from service, broods on the sidelines of activity—its girders and nameplate framing the bright, bustling profile of the more efficient Pipe Still No. 5, Baytown's newest addition.

NEW PIPE STILL AT BAYTOWN

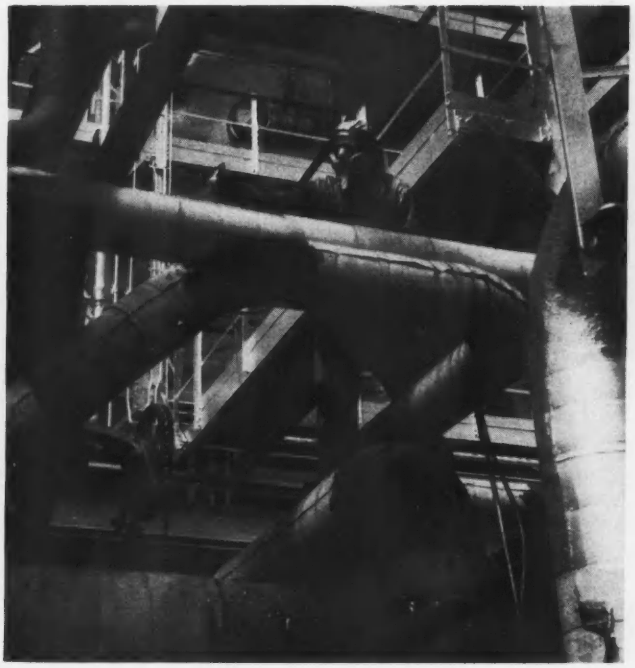
Refinery Newcomer Joins the Team a Full Month Ahead of Schedule

A VISITOR to Baytown Refinery, tilting his head back for a better view of a tall cracking unit, raised this thoughtful question: "How long does it take a thing like that to wear out?"

His guide smiled. "That's one thing we don't worry much about," was the ready reply. "Most of our equipment doesn't have a *chance* to wear out. Long before it wears out, it is replaced with something that does the job better."

It was a fair answer. And it explains why Baytown is gradually taking its old *shell stills* out of service and replacing them with modern *pipe stills*. The shell stills haven't worn out; they just weren't doing a good enough job of distilling crude oil. Unit costs of operating the stills were too high to allow them an old soldier's privilege of fading away. Pipe stills were the answer to Baytown's problem of producing high quality distillation products at lower

Operator takes a reading at control panel behind furnace of pipe still. A gleaming sister still looms big in the background.



Maze of pipes almost hides masked painter as he sprays coat of protective aluminum paint on No. 5's insulated flow lines.

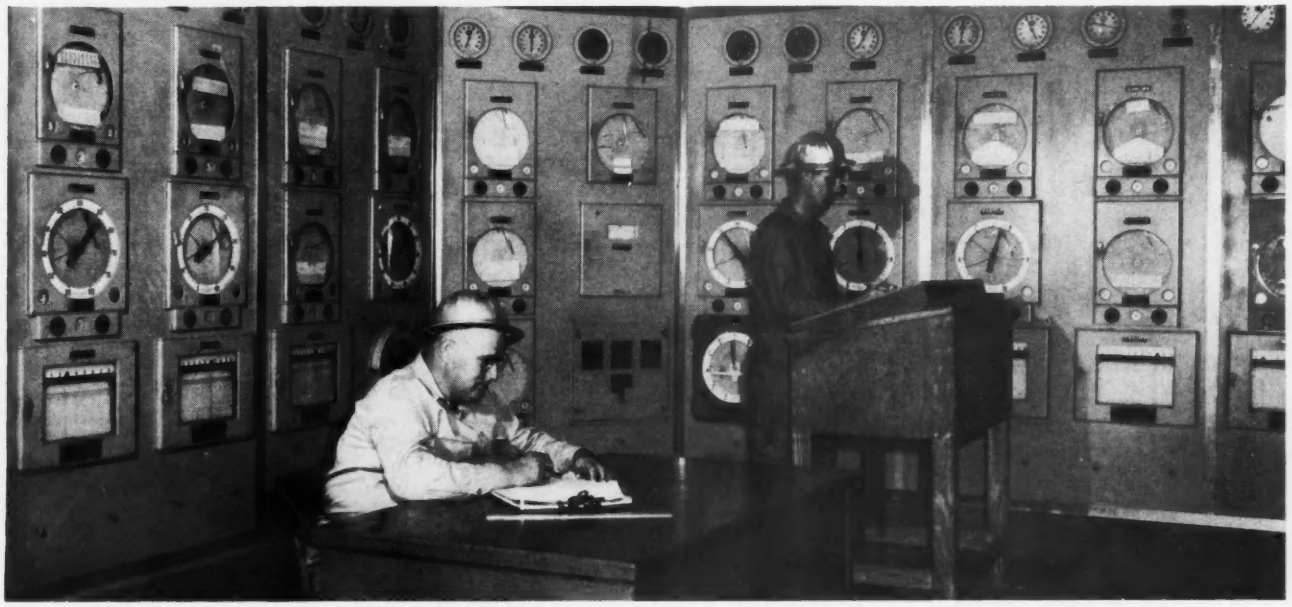
unit cost. Today, only two batteries of shell stills remain in operation, and their days are numbered.

Newest member of the refinery's modern distillation family is Pipe Still No. 5, which processed its first crude oil shortly after the middle of July. With two sister units nearby, it forms a powerful and efficient trio that processes some 200,000 barrels of crude oil a day.

Construction work on Pipe Still No. 5 went forward quickly and smoothly. Originally scheduled to be completed in 13 months, the unit began operating exactly one year, to the day, from the time the contract was signed. It was an almost exact duplicate of Pipe Still No. 4, and some of the drawings for that unit were re-used, with revision, on No. 5. That saved some time. More was saved by excellent cooperation between Humble and the contractor.

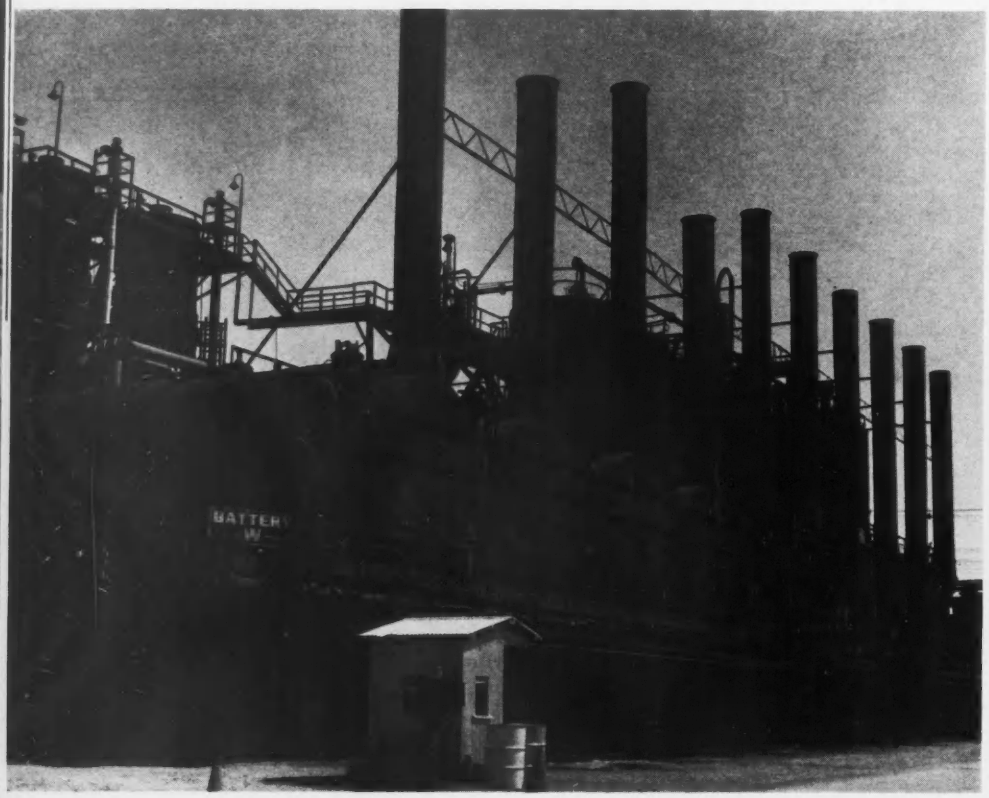
On paper, the month saved in building Pipe Still No. 5 may not sound so important. But in that time, it can process *two million barrels of oil!*

Inside control room, No. 5's stillman jots down some notes on operation of unit. Instruments on shiny control panel look formidable to visitors, but they help stillman keep close tab on crude oil as it flows through new unit's pipes and stills.



Standing three in a row, the pipe stills concentrated in this area of Humble's Baytown Refinery have a combined capacity of some 200,000 barrels of oil a day.

Cold furnaces and smokeless stacks of Battery W symbolize the shift from old to new methods of distilling crude oil. Nearby are Refinery's new pipe stills.



Using pipe stills instead of shell stills, a refiner can go "deeper" into his stocks of crude oil and make more of the valuable products with less waste. Through better use and control of heat, the oil is less likely to "crack" and break down into low quality or useless materials. Heat loss in pipe stills is much less than in shell stills, and heat is an important — as well as an expensive — item in refinery operations.

Pipe stills save valuable space within refinery grounds. They are relatively small and compact. Shell stills, on the other hand, may consist of as many as a dozen or so continuous "heating pots" and related equipment covering a large area and requiring constant checking. Compactness and the use of modern automatic controls add up to better working conditions, as well as better operating conditions.

There are other advantages, too. Maintenance problems are reduced by the use of alloys that resist wear and corrosion and let the unit stay "on stream" for longer periods. More precise control at pipe stills, besides raising standards of product quality, reduces the need for secondary processing steps, such as re-running and treating.

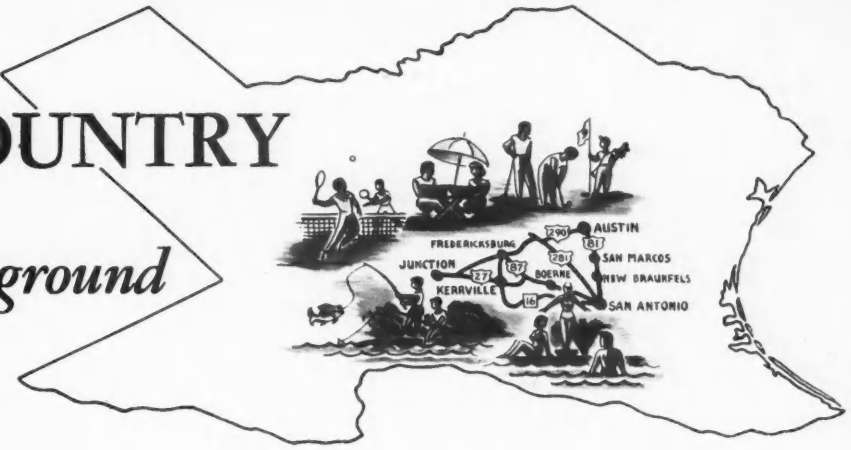
In a business as competitive and as complicated as oil refining, two things are most important: product quality and low operating costs. Each plant must strive to outdo the other on both counts. In a market where customers are quality-conscious, only the best is good enough. And unit costs of production, even shaved down to small fractions of a cent, are watched as carefully as a nurse watches the rise and fall of a patient's temperature.

There is no such thing as "holding your own" or trying to "make do" with old equipment. Experience has taught the progressive refiner to take a realistic view. He knows he can only go forward, and never back, if he wants to stay in a highly competitive business. He knows he must keep modernizing and making improvements — or competitors will cut bigger slices into markets that should be his.

In this respect, pipe stills themselves live an uncertain existence inside Baytown Refinery. Old Pipe Still No. 1, a vast improvement over shell stills when it was first built, is being taken out of service because the new ones are so much better. Even pipe stills have to yield to progress at Baytown Refinery.

The HILL COUNTRY

A Texas Playground



THE Hill Country of Texas is a ready-made vacationland. Once home only to warlike Comanches and the wild game that sustained them, it is Nature's penthouse of rugged hills and clear streams, where deer and turkey still roam, where the air is crisp and clear, and the sky takes on an almost incredible blue. It is an area that ranges 2000 feet and more above sea level, with its own built-in air conditioning.

Ever since the Hill Country was settled, it has been a favorite hunting ground of Texas sportsmen. Memories of the hunt—coffee brewing over an open fire in the frosty dawn, pungent odors of cedar brakes, the snort of a startled buck, or the "putt-putt" of a wary old gobbler—are lures that tug strongly at a sporting heart when November rolls around. These are things that bring the hunter back for more, and each year's crop seems a little bigger than the last.

But hunters are not the only groups to invade the Hill Country in search of sport and pleasure. School-age youngsters by the thousands have developed a lasting affection for the area by attending summer camps that line the banks of its lakes and streams. And that affection has spread like contagion among the parents, who find the hills a cool oasis of relief from sweltering summer. From June to September, when the Texas sun beams its hottest, families come this way in droves from plain and lowland.

People of the Hill Country, alive to their opportunities and responsibilities, have not relied on Nature to provide

Saddle horses, big hats, and tough Western blue-jeans are standard equipment at most Hill Country vacation spots, and the whole family rides. The "dude wrangler" at the left, a real Western cowboy, takes a last-minute check on his riding class.

Artist Avery Johnson, of New Jersey, was intrigued with a painting assignment that carried him through the Hill Country of Texas. Above, his artist's eye was struck with the contrasts between the soft greenery of a gnarled cypress and the bare brown of a Guadalupe sandbar, where a vacationing family spent happy hours in the sun. Below, the Humble sign that thrust up suddenly around the bend of a mountain road held special interest for one whose fuel gauge quivered dangerously close to the "E." He filled his tank, then painted the scene.

everything for the fun and comfort of a family on vacation. To an almost profligate supply of natural beauty, Hill Country vacation spots have added practically everything it takes to keep all members of the family happy during their stay away from home. There's something for everyone, from loafing in a mountain-perched lodge to riding rocky trails in a dude ranch roundup.

The naturalist, amateur or professional, finds the Hill Country a place of never-ending delight. He collects plants and digs among the rocks. He clambers up the slope of some high hill and is not unlikely to find fossil sea shells at the top, for the whole country was once under water, millions of years ago. He is intrigued with the wild life, and with the tall cypresses, whose soft, lace-like greenery shades the rivers. If he is lucky and a diligent searcher, he may uncover along a riverbank the tracks of dinosaurs that lumbered through the ooze before the dawn of Man.

Dude ranches that dot the area give anyone so inclined a chance to fulfill that secret urge for a brief go at the boots-and-spurs life. In a week or two, any greenhorn who sets his mind to it can learn to give a creditable account of himself at "rolling his own," harmonizing around a campfire, sitting a Western saddle or a rodeo rail, and clopping along in cowboy boots with a fairly authentic bowlegs gait.

Western dances compete only with rodeos-under-the-lights for nighttime entertainment. After a few evenings, the dude wrangler can trip out a schottische or a "Cotton-Eyed Joe" with the best of them.

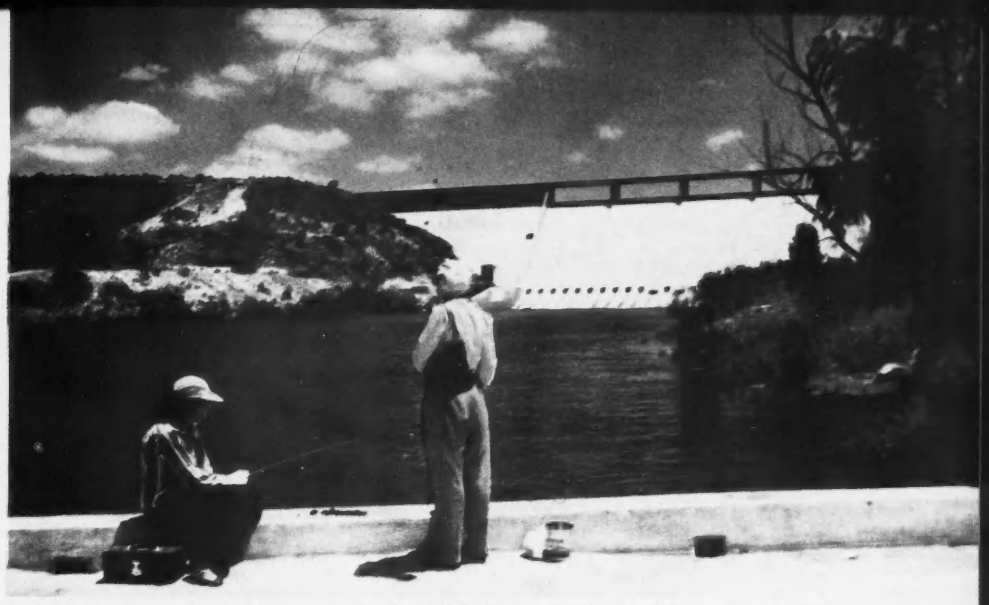
For the less venturesome, the area offers a wide choice of other entertainment. Those who like their fun on water never tire of the Hill Country. Rivers and lakes are there in plenty, and crystal springs bubble out of mountainsides.

These are no turgid, low-country waters. Strained through layers of limestone that underlie the Plateau, streams run clean and clear, reflecting sunlight like clusters of diamonds. Hill Country water is always in a hurry, foaming riotously over rocks and cascading in waterfalls, as if eager to be off on the long journey to the sea.

Just a swim in such waters is an experience in itself. They are surprisingly cold, even in mid-summer, and every nerve is set a-tingle. When the swimmer tires, fishing and boating are always within easy reach. The muscular and stout of heart may even find places that feature water-skiing, with all equipment furnished.

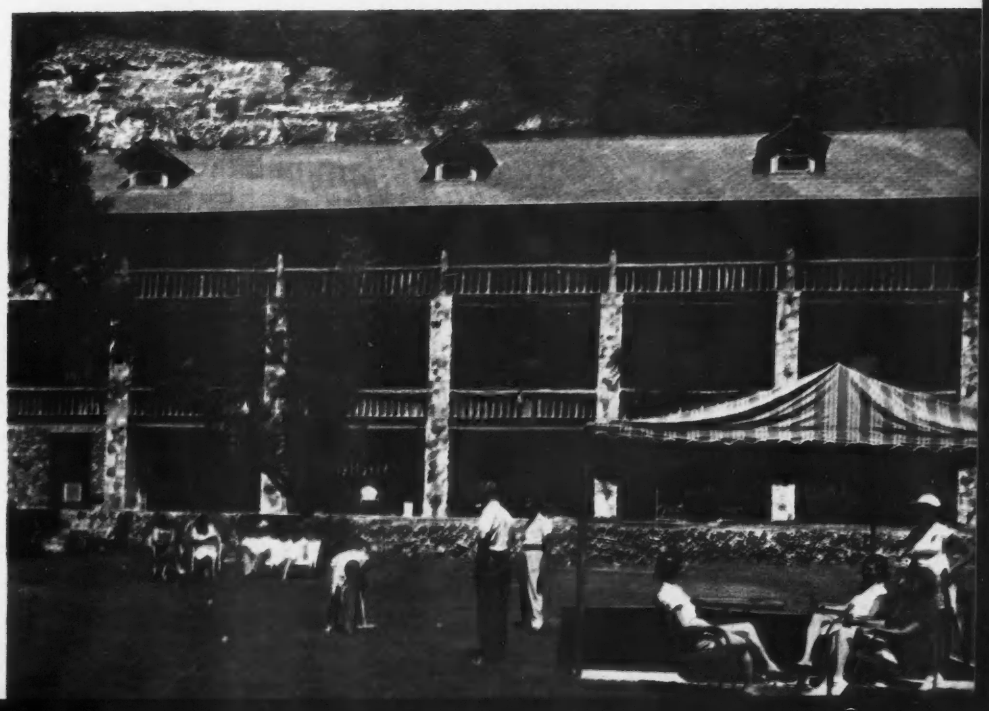
Nature has had a welcome assist from Man in providing water playgrounds for Central Hill Country sportsmen. On the Colorado River above Austin a series of dams has been built—Buchanan, Inks, Granite Shoals, Marble Falls, Mansfield (formerly Marshall Ford), and Austin. For people down below, these dams mean flood control, water for irrigation and other purposes, and a supply of electricity. For vacationers above, water impounded by the dams mean lakes where one can swim, boat, camp, and fish to heart's desire.

Let each one name what he expects of an ideal vacationland. The Hill Country has it.

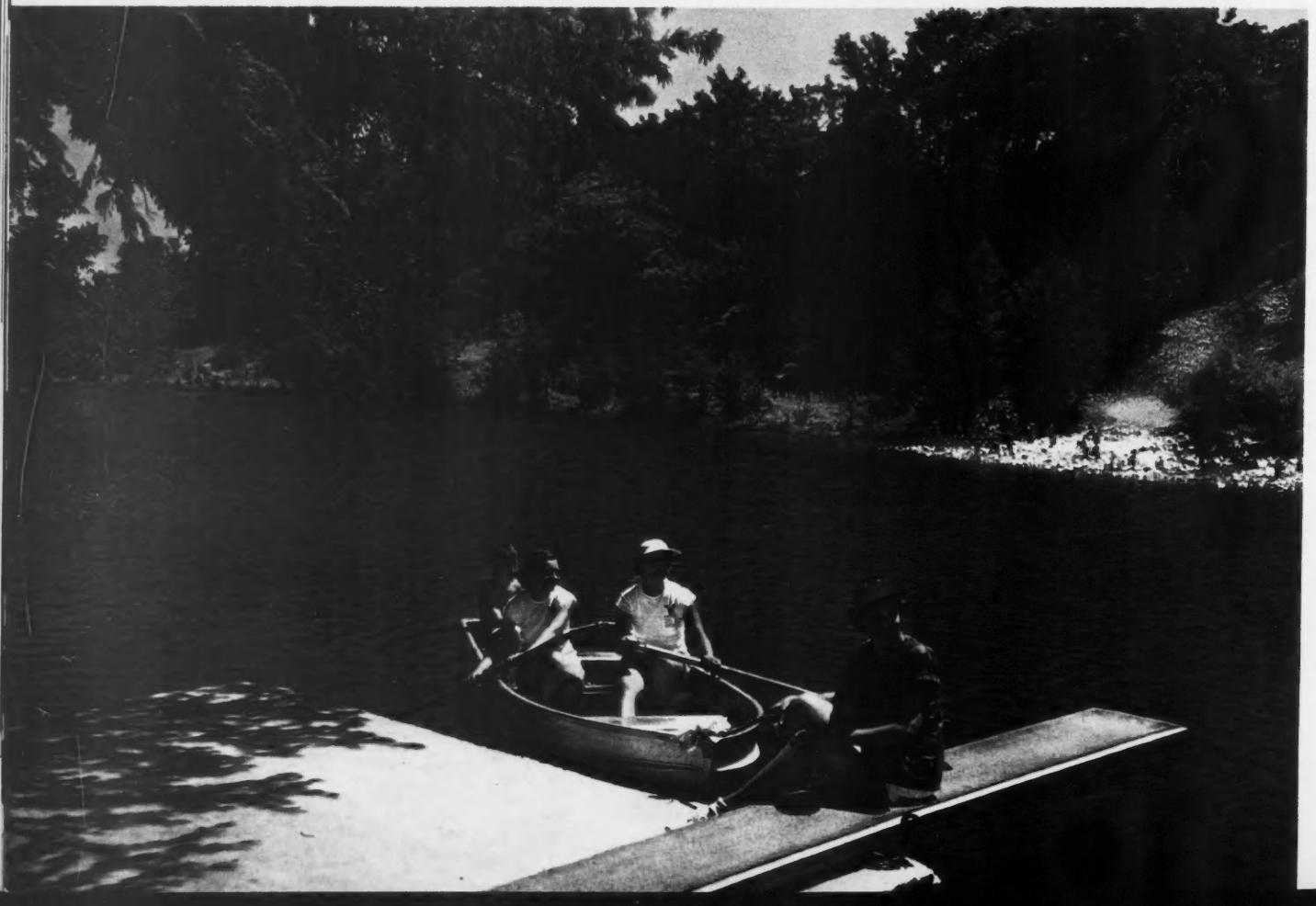


Fishing is no rich man's sport in the Hill Country. Some lake or stream is always nearby, and little equipment is needed. These ladies try their luck on the Colorado River below Mansfield Dam. Below, a beautiful spring-fed swimming pool.

Places to stay in the Hill Country vary from simple but comfortable cottages to the elaborate Inn shown below, built on a hillside sloping down to the Guadalupe.



Summer camps along the shores of rivers and lakes give many a Texas boy and girl their first acquaintance with the Hill Country. Healthy tans and appetites are the natural result of an outdoors schedule that calls for plenty of water sports.



VACANCIES ARE HEADACHES

A SURVEY map of Texas resembles a huge crazy quilt in which thousands of odd-shaped pieces — each piece representing a different survey — have been fitted carefully together.

Unfortunately for the landowners and the oil companies who must lease their mineral rights, the apparent perfect fitting of these pieces is at times an illusion. Property lines, as they appear on the survey maps, do not always jibe with the actual lines walked and measured by the surveyors. Nor does the acreage contained within a landowner's fences always coincide with the acreage described in his title to the property. Unwittingly, he may be occupying a forgotten strip of land left by error between two plots surveyed a century or more ago. Although generations of farmers may have used this excess land innocently, it is still legally vacant. As a vacancy, it belongs to the State of Texas.

Like an uncharted reef in an ocean of clear titles, a land vacancy is a constant hazard for an unwary oil company exploring in the vicinity. Suppose, for example, an oil company leases the farm mentioned above and without checking the location of the surveys on the ground, drills a discovery wildcat well on the strip of vacant land. Someone later discovers the existence of the vacancy and files a claim with the General Land Office. The oil company now learns that it has drilled a well on State property from which it holds no lease. Under the present law the State is required to sell or lease the property to the occupying landowner, if he wishes to buy it. If he does not wish to buy or lease, the State may lease the mineral rights to the vacancy applicant. If this is done the oil company will lose a lease on the property on which it has already drilled a producing well. Also, even if the landowner exercises his right to buy the land, a one-sixteenth royalty is given to the discoverer of the vacancy and another one-eighth to the State.

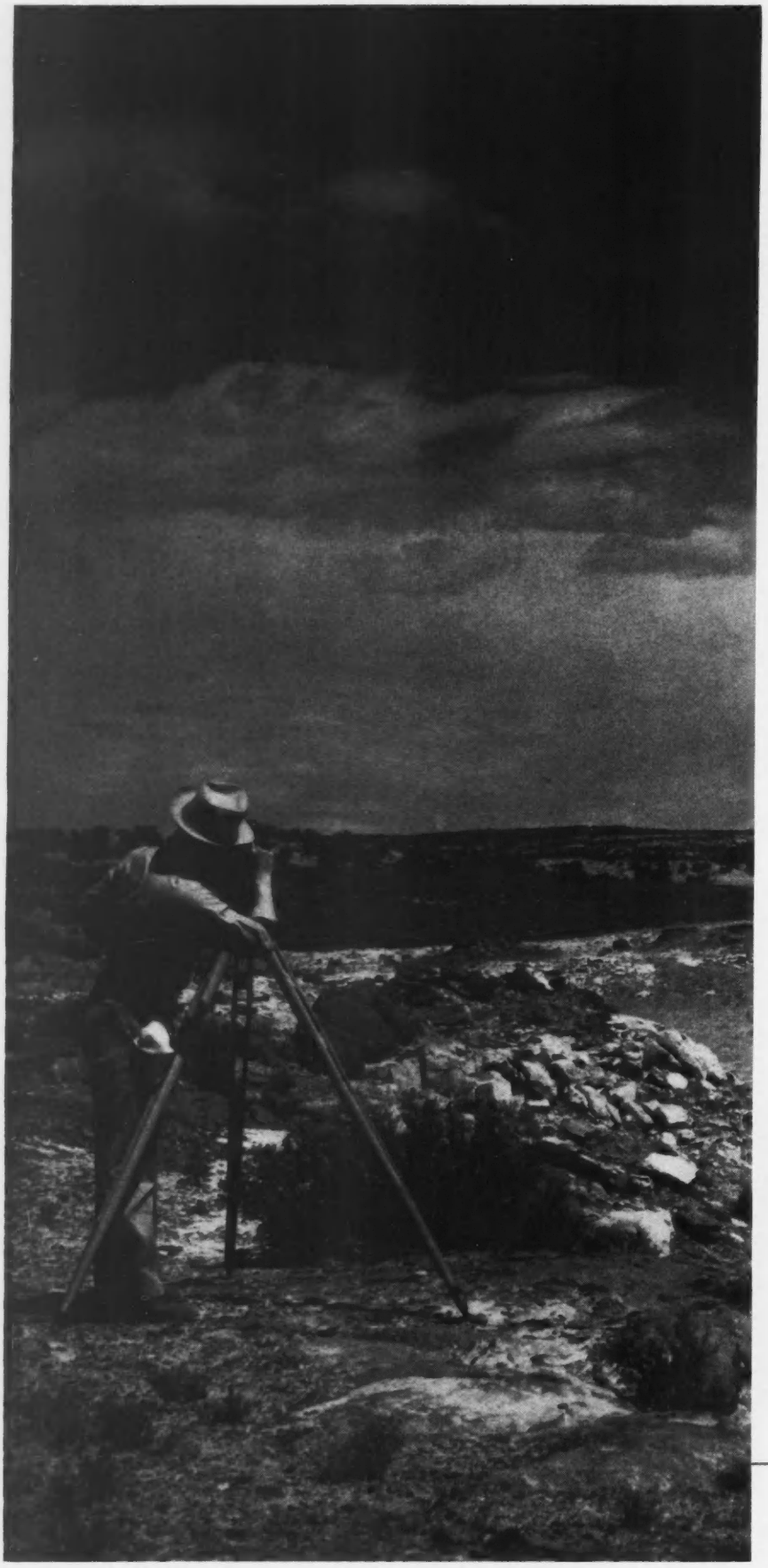
Needless to say, every responsible oil company leasing land in Texas now takes careful precautions to find and clear up possible vacancies before they can cause trouble.

This endless task of hunting out vacancies is no small matter. Thousands of acres of such unpatented land have been passed by unnoticed in the rapid and sometimes hectic development of Texas since the days of Austin's colony. Considering the problems of surveyors in the turbulent history of the State, it is surprising that the jigsaw puzzle of surveyed plats fits together as well as it does.

Some of the land vacancies were created because of inaccurate surveying instruments of pioneer surveyors. Early settlers, lured to Texas by the offer of free land, chose their farmsites along the banks of rivers and creeks, where the best soil was to be found. The colonist would have his league of land surveyed not in a square, but in some irregular shape that would encompass the most fertile land. The result was a complicated maze of odd-shaped tracts. It was almost impossible for the early surveyors, with their crude instruments, to survey and fit together these pieces without leaving occasional vacancies and overlaps.

Paradoxically, the surveys of the 1820's and early 1830's were generally more accurate than those made half a century later. The period following the Civil War was one of unprecedented and often haphazard expansion. Now a struggling young State, Texas still had free land for those venturesome enough to settle it. Vast land grants were offered to railroads who would build their lines into new areas of the State. Manu-

Counting revolutions of wagon wheel was fast method of measuring land used by one surveyor.



facturers were lured by the promise of land grants proportionate to the machinery they would bring into the yet unindustrialized towns. Even after a quarter of the public lands was set aside for school funds, there was still plenty of land for newcomers. The legislature traded three million acres of its vast land resources for a new State Capitol.

Each of the thousands of land grants and purchases required a survey. And with land so plentiful and so cheap, what did it matter whether a man was given a little more than his title called for? There was enough land for everybody.

Although most surveyors of this rapid-development period made a conscientious effort to run their lines and keep authentic field notes, some succumbed to the illusion of plenty. Sometimes a surveyor would calculate field notes and plot a survey on a map without setting foot on the land. One enterprising engineer devised a method of eliminating the slow process of dragging the surveyor's measuring chain. He measured the circumference of his wagon wheel, marked a spoke with his handkerchief, then counted the revolutions of the wheel as he drove the wagon across the prairie. It was not very accurate, but it was fast.

As long as land was plentiful and cheap, the existence of vacancies and overlappings was a matter of little concern. Few landowners deemed it necessary to prove their titles by having their land resurveyed.

Then came the discovery of oil in Texas.

Land titles took on a new significance as more and more oil fields were discovered and the mineral rights were traded in extensively. Under the then existing law, anybody who discovered vacant land could file a claim on it and obtain a lease from the State for a nominal price. When that happened, the unfortunate landowner who had occupied and improved the land was an unhappy victim of circumstances. He had no protection under the law.

Spurred by the possibility of oil discoveries, many land brokers and other

Using modern precision surveying instruments, skilled Humble engineers rerun the lines of a plat as described in field notes of

enterprising individuals became professional vacancy hunters. On more than one occasion vacancies were discovered and claimed by outsiders in areas of oil production, with disastrous results to the dismayed landowners.

To protect the rights of landowners, the Texas legislature changed the vacancy law in 1939. Now, with rare exceptions, the landowner is given the privilege of buying from the State any vacant land found on his property. The discoverer of the vacancy gets a one-sixteenth royalty, and the State retains a one-eighth or one-sixteenth royalty, depending upon whether the vacancy is less or more than five miles from a producing well.

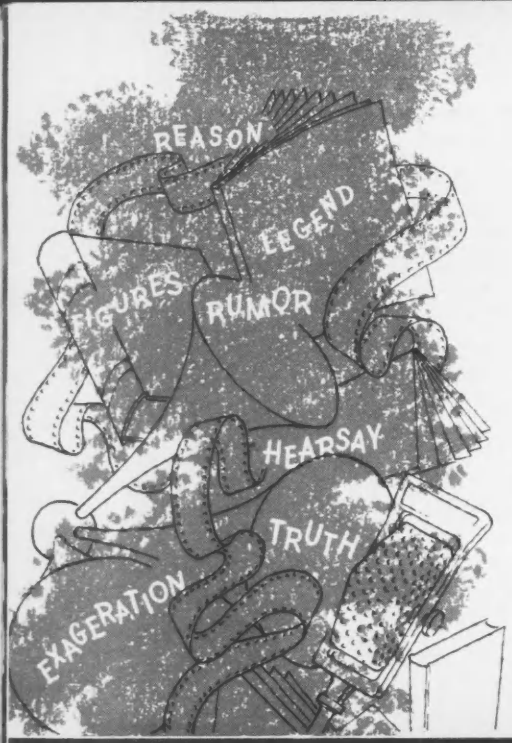
By hunting for vacancies before drilling operations begin in a new area, Humble protects not only its own interests, but those of the landowners whose properties it has leased. The Company's title men, civil engineers and lawyers work in close collaboration to make certain that no vacancy goes undetected. All titles and deeds are traced back to the original land grants, when possible, and the field notes of the various surveyors are carefully examined.

Using an aerial map of the area, and following in scale the original surveyor's field notes, Humble's civil engineers plot the lines of each survey. If the descriptions and notes produce a map without conflicts or gaps, there is little likelihood of a vacancy.

But if all the pieces do not fit together properly, the engineers know that something may be wrong. A surveying crew is then sent into the field to rerun the lines of the original surveyors, as described in the field notes. If the results of this resurvey indicate the existence of a possible vacancy, the Company presents the information to the landowner.

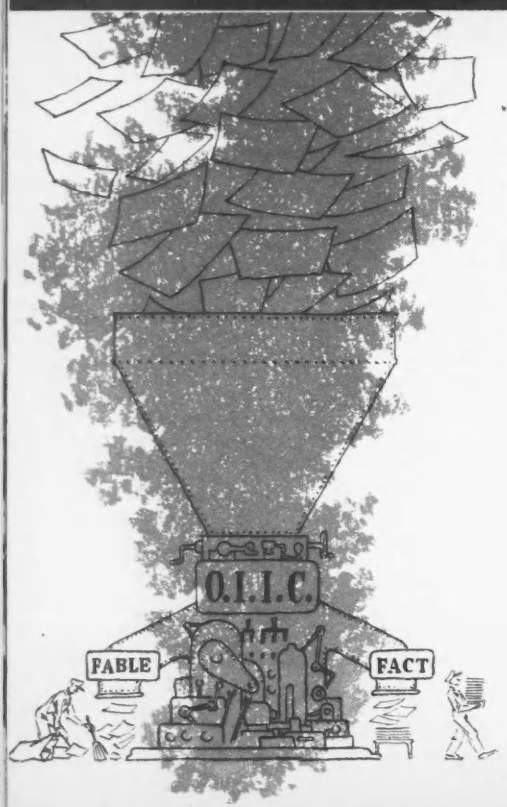
Armed with the data provided by Humble, the landowner can then file a "good faith" claim with the General Land Office, buy the land for a price representing the reasonable value of the land and clear up his title without losing any royalty to a vacancy hunter. Few landowners fail to take advantage of the opportunity.

the original surveyor. If results of the resurvey indicate existence of a possible vacancy, Company gives necessary data to landowner.



FACTS, NOT FABLES

Oil Industry Information Committee Seeks To Get Industry Facts Before American People



IN OUR fast-paced life, many things compete for public attention. Every one of us is bombarded daily with printed and spoken words, and with pictures. Competition for our leisure hours is so keen that leisure itself is hard to find.

How, then, can an industry get its story across? How get the facts to people so that they may fairly appraise that industry and its services?

Almost without fail the answer lies in an industry-wide cooperative effort to develop facts and figures and supply them to press, radio, and other mass media which reach the millions.

Leaders in the oil industry recognized the need for such an information distributing organization in 1946. In that year the American Petroleum Institute set up a public relations committee. One of the first acts of the committee was to conduct a public opinion survey. What did the public know about the industry; what didn't it know? The committee learned that Americans generally had a vast amount of misinformation about the oil industry and little accurate knowledge.

The committee soon set out to do something about it. A program was started to try and correct mistaken notions, to substitute facts for fables.

From modest beginnings the work has grown rapidly. Today, the Oil Industry Information Committee carries on a continuing program of preparing and distributing factual information about the industry.

Oil Progress Week, an annual Fall event, is observed over the nation as the climax of the year's work of calling the public's attention to what the oil industry is doing and has done. This year, Oil Progress Week is October 14-20.

The central committee of O.I.I.C. is made up of 35 oil men from all branches of the industry. To insure the broadest possible viewpoint and experience, these men are representative of oil companies from coast to coast. It is this group which plans the program and supervises the preparation and distribution of material to the public through various channels.

The enormous task of getting the prepared information down to millions of Americans on the local level falls to a volunteer army of about 17,000 oil people.

The nation is divided into 13 districts, each composed of several states. A working oil man serves as district chairman and appoints state chairmen.* Each state chairman in turn appoints regional and local chairmen, and the latter form committees to aid them in carrying out the program. Thus the oil industry story is carried to the public in city, town, and hamlet by local oil men who are known and respected.

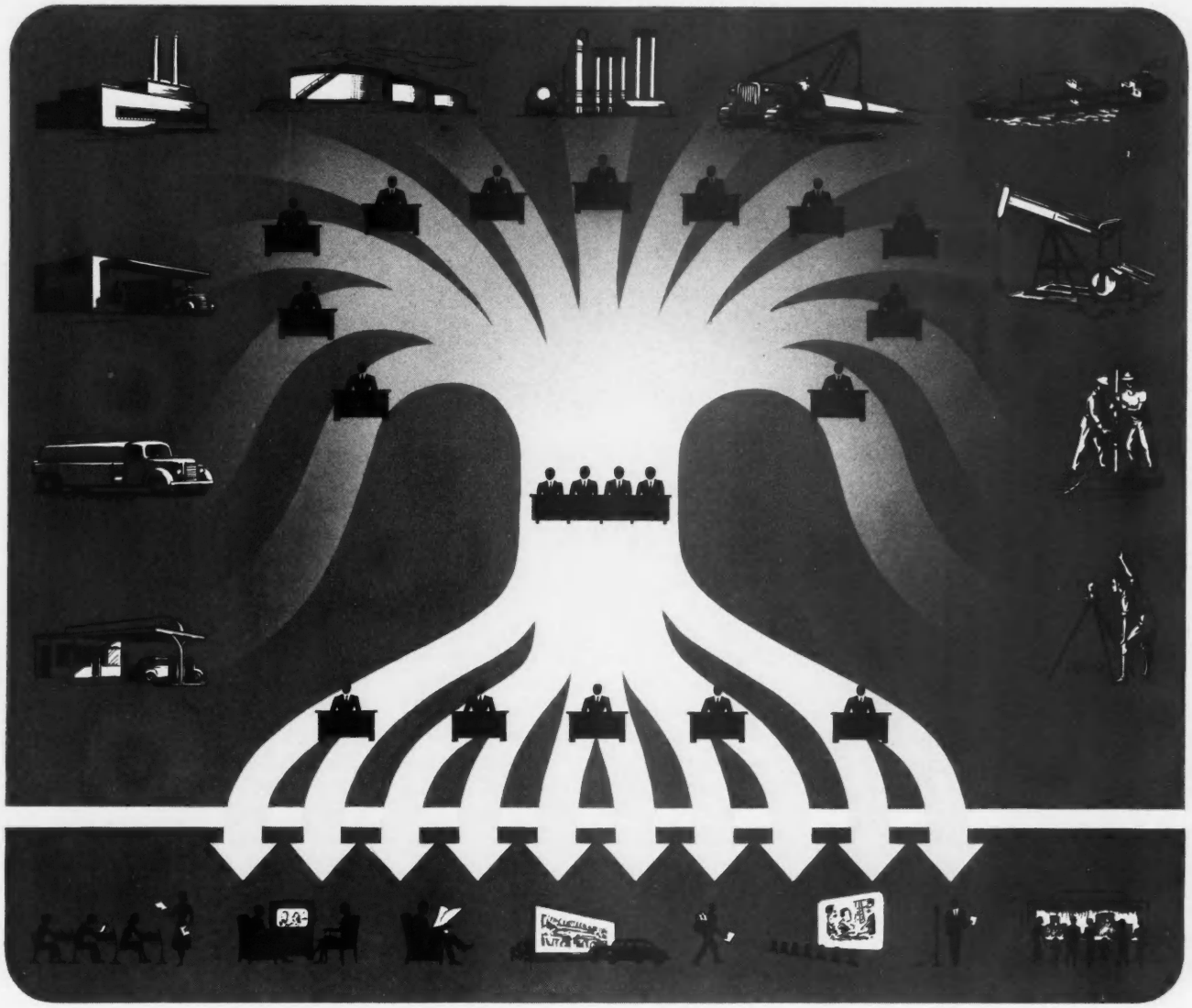
The program of information which this network of oil industry people carries on uses every recognized medium for distributing information. National magazine advertising, radio, motion pictures, pamphlets, posters, meetings —all have been used and are being used. Basic materials are available to school teachers; industry speakers appear before hundreds of organizations each year to tell the oil story.

What is the story? It is basic, factual material about the industry. While a great variety of subjects are covered, most of the program revolves around three major points:

1, That the industry is competitive; 2, that it is progressive and operates in the public interest; and 3, that prices are determined by the economic laws of supply and demand.

O.I.I.C. seeks to dispell the once commonly held impression that a few big oil companies control almost all of the business with facts like this: that some 40,000 competing oil companies of all sizes are operating in the United States; and that 95 percent of the na-

* Texas chairman this year is R. M. Stephens, Humble's acting Sales Manager.



From coast to coast, from all branches of the industry, come the oil men who form the central O.I.I.C. Committee. It steers the distribution of information through regional and state organizations and through all mass media to the American public.

tion's 200,000 service stations are owned or operated by independent business men competing with one another.

The fable that the industry withholds new developments from the public is another target. The facts are that the oil industry spends $100 million each year in an intensive program of competitive research to find more oil and to develop new products and find new uses for them. The entire field of petroleum synthetics made available for general use in the past 10 years attests to the progressiveness of this research.

The somewhat popular fable that a few men get together to set the price of petroleum products is also exploded with facts. Repeatedly, the public is informed that the laws of supply and demand dictate oil prices just like the prices of other commodities.

In addition to these three major points the program also seeks to re-affirm the faith of the American people that their individual interests, as well as those of the nation, are best served in peace and in war by competitive privately managed business enterprises.

While all of this information is assembled and channeled to the American public, it is also aimed specifically to the two million employees of the oil industry.

The employee group is the bed rock of the program. It is only natural that the average citizen should turn to an oil company employee for information, for the answer to a perplexing question. And when the average citizen hears about the oil business from a friend or acquaintance in it he attaches significance to it, and more important, he believes it.

Humble employes and others in the industry, then, are key people in the continuing information program. Company pride and industry pride are the stimulant for all oil industry employees to keep themselves informed.

The program is so broad that all employees seeking more information about their industry can get it in advertisements in national publications, in their own Company publications, in newspapers and newscasts, in pamphlets, and particularly in various forms from their local Oil Industry Information Committee organization.

Skillet-shaped peninsulas will give easy access to Ft. Chadbourne's raised wells when Oak Creek Reservoir becomes filled with water.

WELLS ON STILTS

ON THE sun-scoured plains of West Texas, where rain clouds all too often fight a losing battle with drouth, water is like money in the bank and seldom does anyone have more than he needs. A lack of water, however, was not the problem which faced Humble recently in the Fort Chadbourne field in eastern Coke County. It was the prospect of too much water—and how to raise three producing wells above the level of a projected lake.

The new lake is the Oak Creek Reservoir. It is currently just a dotted line on the map, but a year or so hence, after an earthen dam now abuilding pens in the puny stream which ranges through Fort Chadbourne field, some 4000 acres will ripple with cool water. From this king-size waterhole will flow six million gallons a day, most of it going to slake the thirst of bustling Sweetwater, 30 miles to the north.

Of more than a hundred Humble wells in the area, only three—two on natural flow and one a pumper—squatted in the path of crews assigned to strip the lake site of mesquite and underbrush. These three were left there like lonesome outposts of industry until Humble's engineers could come to the rescue and lift them high-and-dry above water level.

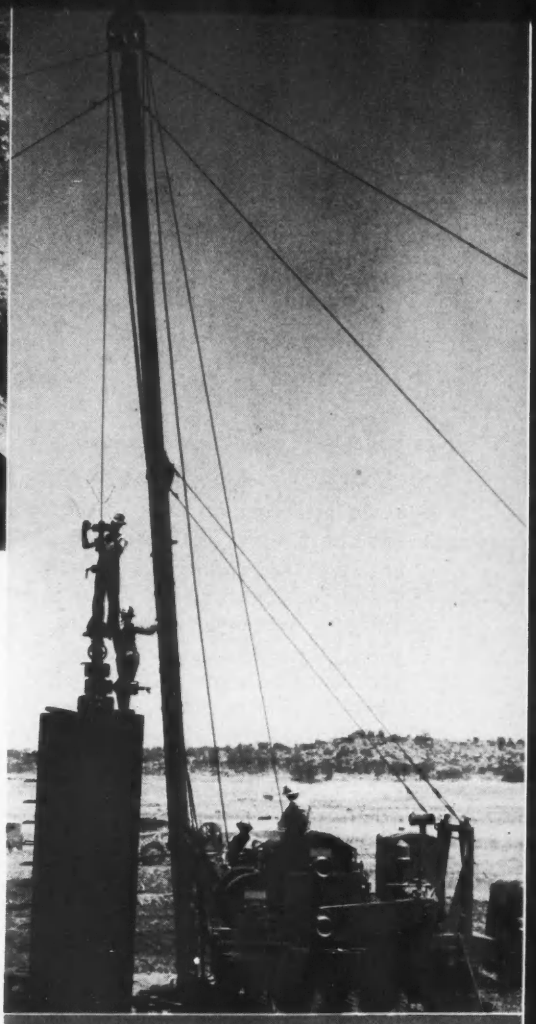
The well-raising got under way early in August. As a "marine operation," it was one to give a real web-foot oil worker the willies. Rust-colored dust swirled under a blazing sun, and the mercury hovered around 105 degrees. The mesas and bumpy little hills shimmered with heat. The only water visible was the drinking kind, iced down in 10-gallon containers.

First to be hoisted skyward by the tin-hatted well servicing crew was Sallie Odom No. 8, a flowing well holed down in a stubble of grass 400 feet east of Highway 70. The steps taken to handle this 5300-footer were pretty much typical of the entire operation. Reduced to garden-variety simplicity, they were: Uproot No. 8's valve-bedecked Christmas tree, give it a waterproof potting, replant it 16 feet in the air.

Before the Christmas tree could be removed, the well had to be killed. The crew did this by pumping in 200 barrels of water to provide a *hydrostatic head,* or water pressure, strong enough to quell the flow of oil. A little more than 140 barrels went to fill the 5½-inch casing and the 2-inch tubing. The rest seeped into the oil sands.

The well dormant, the Christmas tree was unflanged and set aside. The next step was to plop a caisson over the well. Sturdy as a smokestack and just as black, the caisson was a 3000-pound steel cylinder 16 feet tall and five feet in diameter. Inside was a ladder to give access to ground-level fittings.

Almost exhausted by long dry spell, Oak Creek lies in a tired puddle below the earthen dam which, when completed, will fence in a sprawling 4000-acre lake.



Flanged casing and coal-black caisson wait nearby while well footing (above) is daubed with Rust-Ban. At right, caisson is in place and swabbing has begun.

The crew bolted the caisson to a previously prepared concrete footing and then flanged on an extra piece of casing to extend the wellhead just as high as the caisson. The tubing was similarly lengthened, and finally the Christmas tree was lifted to its new seat. That completed the operation except for *swabbing,* a process to rid the well of its load of water.

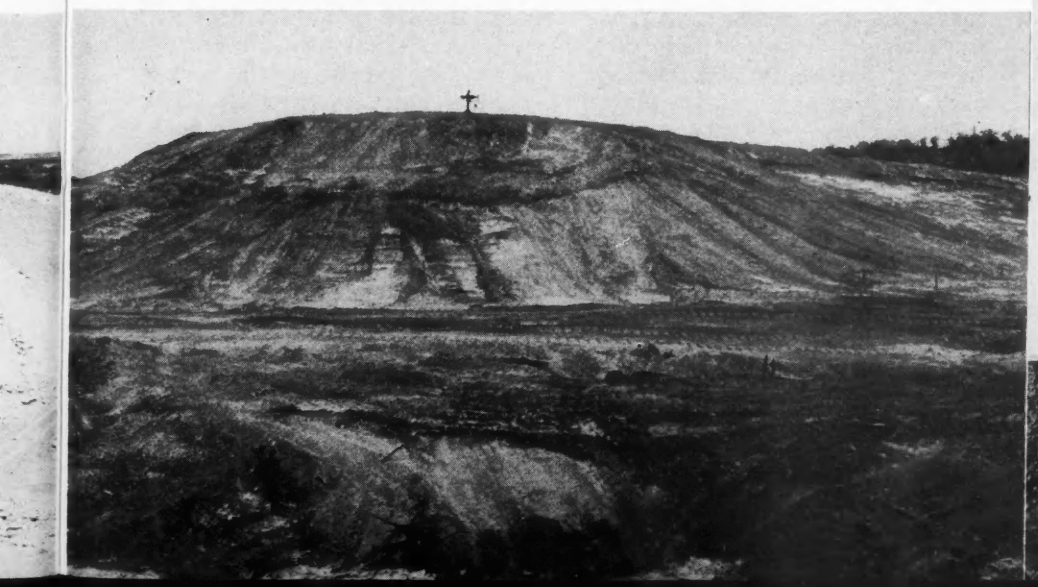
Swabbing took time. The rubber-jacketed swabs, weighted by two heavy 15-foot sinker bars attached to a steel cable, could bring out only five barrels of water on each 30-minute trip to well bottom. However, after a hundred barrels had been swabbed out, the well "kicked off" and started flowing on its own.

Meanwhile, earthmoving equipment—a 3-cubic yard dragline, a 16-c.y. carry-all, a sprinkler truck and sheep-foot tampers—rumbled and grunted nearby, rooting up high chunks of dirt and working them into a peninsula stretching from highway to well. This stone-reinforced ramp will bulge into a 200-foot circle around No. 8, giving plenty of room for any future servicing which may become necessary.

The procedure for raising Sallie Odom No. 4 and Odom State No. 1 (the pumper) was much the same, but being on slightly higher terrain, No. 4 had to gain only 10 feet, the pumper 16 feet. As for the tank batteries, all were placed on the shaggy hills which will overlook Oak Creek Reservoir.

Some day not too far off, motorists spinning along Highway 70 between Sweetwater and San Angelo will enjoy the pleasant vista of a blue lake sprawled across once-parched ranch land. They will also see man-made *mesas* fingering into the lake, and on each a Christmas tree.

Using the caisson as a perch (right), the farm boss checks on the replanted Christmas tree. Below a well rides the sky line of its man-made peninsula.



Twelve Employees Retire

A. L. Jackson has 36 years; R. M. Bayless ends 50 years in communication business

TWELVE employees have retired since these columns last reported, all but one of them with more than 20 years' service. Among them claimant to the longest career with Humble and affiliated companies — 36 years — is A. L. Jackson of the Comptroller's Department, Houston; holder of the shortest service record is B. F. Franklin, Humble Pipe Line Company, Hull, with 18 years. R. M. Bayless, superintendent of Communication and Electrical Department, Houston, closed out a career of 50 years in the communications business, 32 years of it with Humble.

Production Department — Ollin W. Williams, Sr., lease pumper-gauger at Hardin District, retired June 24 after more than 26 years' service. Mr. Williams joined Humble at West Columbia as a roustabout. He worked as rotary helper, rig builder helper, rotary derrickman, engineer, driller, and fireman. He bought a home at San Leon, Texas, where he will live during his retirement.

Baytown Refinery — Gardner K. DeLaune, handy repairman, retired July 26 after more than 31 years' service with Humble. When Mr. DeLaune first joined Humble, he worked for the Housing Department of the Refinery. Later he was with the Plant Protection and Power & Water departments. His special interests include gardening and fishing.

Robert Ford, laborer, retired July 29 after more than 28 years' service. He started work with Humble as a laborer in the Refinery's Labor Department. All of his service with the Company has been spent at Baytown. He plans to continue his activities in his home and church work, which were his special interests while he worked at the Refinery.

James C. Glass, pipefitter first, retired July 9 after almost 24 years' service. Mr. Glass started his employment with the Refinery as a helper in the Pipe Department. His hobby is fishing. After retiring he intends to buy a small place in the country where he will raise a garden and chickens.

Frances M. Smith, chief telephone operator, retired July 2 after more than 27 years' service. All of her time with the Refinery has been spent as telephone operator. She became chief operator in May, 1949. Her hobbies include flowers, embroidering, and traveling. On retirement she plans to travel some in the East before returning to Baytown to live.

Houston Office — Arthur L. Jackson, supervisor of Stationery, Printing & Reproduction Section, retired August 30 after more than 36 years' service. Before joining Humble in October, 1921, as a clerk at Baytown, Mr. Jackson worked several years for Standard Oil Company of Indiana at Wood River, Illinois. He transferred to the Houston Office in 1927. In 1947 he was named head of the SP&R Section. His hobby is woodcraft. On retirement, he will move to his newly built home at Kerrville.

Edna Lee Milam, chief telephone operator, retired August 5 after almost 27 years' service. Miss Milam worked for Southwestern Bell Telephone Company on its local test board in Houston before she joined Humble in 1924. All of her employment with the Company has been as chief telephone operator. Under her guidance Humble's PBX switchboard was expanded from facilities for 15 trunk circuits and 200 phones to extensive automatic and other electrical equipment used with about 1600 telephones. She includes among her special interests traveling and making friends. During retirement, she plans to spend more of her time at these hobbies.

Esther P. Milligan, senior secretary in Refining Operating, retired June 19 after almost 27 years' service.

Grace D. Pyle, statistical clerk in Refining Accounting Office, retired July 7 after almost 29 years' service. Mrs. Pyle started to work for the Company as a stenographer-typist. All of her service has been spent in the Houston Office except for about a year in 1923-24 in which she was secretary for the late R. E. Powell, superintendent of Baytown Refinery. During retirement, she will be a full-time housewife and continue her hobbies, gardening and fishing.

Charles B. Voss, accountant in Production Accounting, retired June 11 after almost 26 years' service. All of his service has been with the Production Accounting Office in Houston. Mr. Voss will do gardening and carry on horticultural experiments; both were hobbies of his before his retirement.

Humble Pipe Line Company — Raymond M. Bayless, superintendent of Communication & Electrical Department in the Houston Office, retired July 16 after more than 32 years' service. Mr. Bayless has been in the communications business for 50 years, having started as a night telephone operator in a small exchange while going to school during the day. In 1919, he joined Humble as head of the Communications Department. His first job for the Company was building a short telephone line between Goose Creek and Baytown Refinery site. To facilitate movement of cars for construction of the refinery, he placed a telephone in a box he hung on a pine tree. All of Humble's present communications system was constructed under Mr. Bayless' supervision. He plans to travel, hunt, fish, and visit friends during retirement.

Benjamin F. Kemp, mechanical supervisor at Hull, retired August 1 after

more than 18 years' service. He was employed at Conroe as a mechanic. Later he worked at Main Street garage in Houston, Webster, Pierce Junction, Sugarland, Tomball, and Hull. He plans to raise chickens and rabbits on his place in Missouri City.

More Money for Ideas

At a meeting held July 12, the Central "Coin-Your-Ideas" Committee considered and passed on ideas adopted during the second quarter of 1951. During the same meeting, supplemental awards for suggestions adopted during the second quarter of 1950 were reviewed, reappraised, and considered.

Initial awards for the second quarter of 1951 amounted to $9,725. In Refining, 114 awards totalled $4,865; in Production, 81 awards totalled $2,830; In the Houston Office, 19 awards totalled $875; in Sales, 13 awards totalled $470; in Humble Pipe Line Company, 13 awards totalled $685.

A total of $1,085 was paid in supplemental awards for ideas adopted during the second quarter of 1950. In Refining, nine awards totalled $905; in Production, two awards totalled $105; in Sales, one award of $75 was made.

Supplemental awards are made after an accepted idea has proved its usefulness over a one-year period.

Employees Recently Called to Military Service

AIR FORCE

Bowen, Kenneth M., Jr.	Exploration-Geologic
Brantley, William T., Jr.	Land Records & Rentals, Houston
Correu, Jack Daniel	Luling, Production
Forte, Robert Ausbun	Northeast Texas Division Sales, Dallas
Graham, Fletcher Philip	Gulf Coast Division Office, Houston
Holden, Robert Edward	Flour Bluff, Production
Janicek, Lee Roy	Production Operating, Houston
Lemoine, Bennie Francis	Louisiana Division Office, New Orleans
Spence, Irving Gene	Exploration-Geologic

ARMY

Booksh, Eric Lionel	North Crowley, Production
Carlin, Donald Blanton	Sales Accounting, Houston
Erwin, George Lycurgus, Jr.	McCamey, Production
Fife, Robert Travis	Lovell Lake, Production
Greer, Frederick Edward, Jr.	Tomball Gas Plant
Jones, Lee Roy, Jr.	Katy Gas Cycling Plant
Lamonte, Wallace Chester	Stationery, Printing, Houston
Ledbetter, Reginald Rosco	Sales Accounting, Houston
McMillan, Hubert Dean	Snyder, Production
Noonan, James Meenan	Exploration-Geologic
Pratt, Kern, Jr.	Louisiana Division Office, New Orleans
Skipper, James Maurice	Civil Engineering, Houston
Wolters, Thomas Albert	East Texas Division Gas Plant

NAVY

Burgess, Walter George	American Gas Plant
Canet, Ernest Cunard, Jr.	Baytown Refinery
Cavalier, Emmett Edmond	Baytown Refinery
Claborn, Wade Earl	Tomball, Production
Coe, Arlord Falvey	Conroe, Production
Ellis, Billy Edwin	Gas Construction, Houston
Hicks, Robert Miller	San Angelo Bulk Station, Sales
Hoover, George H., Jr.	Pipe Line Odessa Office
Hudiburg, Wendell Cullen	Production Accounting, Houston
Kubik, Johnny Albert	Baytown Refinery
McCarty, Don Burrel	Tomball Natural Gas System
Mings, Tom Erwin	Gulf Coast Division Office, Houston
Roberts, James Edward	Jourdanton Gas Plant
Schiller, Milton Edward	Baytown Refinery
Shoemaker, Leonard Miller	Baytown Refinery
Tartt, Robert Morgan	Baytown Refinery
Thompson, William Purifoy	Baytown Refinery

MARINES

Parish, Randall J.	Flour Bluff, Production
Thomas, Phil Howard	Exploration-Geophysics

Death Claims 12 Employees, 13 Annuitants

Since the last issue of THE HUMBLE WAY, 13 active employees and 12 annuitants have died.

Active employees who have died are: Harry N. Challie, 22, accounting clerk in Crude Oil Accounting in the Houston Office, on June 25; Cabaniss Forman, 48, pipe liner at Harbor Island, on July 15; Charles H. Hammett, 44, field dispatcher in the North Texas Division at Cisco, on June 12; James C. Hathorn, 64, lease pumper-gauger at Gladewater District, on June 8; Herbert W. Herring, 42, relief pumper at Baytown Refinery, on July 9; Chester R. Hollon, 35, electrician helper at Baytown Refinery, on June 22; Percy Price, 50, roustabout gangpusher at Livingston, on June 12; James W. Redford, Jr., 51, assistant district chief clerk at Flour Bluff, on June 13; George C. Sterling, Sr., 52, carpenter first at Baytown Refinery, on June 5; Richard C. Stone, 51, district sales manager at San Antonio, on July 6; Perry J. Wanzer, 47, shop foreman at Baytown Refinery, on June 2; Lady Tilson Wilson, 54, general division clerk in the Gulf Coast Division Houston Office, on June 7; Meeks B. Winland, 54, connection foreman at Luling, on July 10.

Annuitants: Erwin S. Barrow, Sr., 61, special assistant in Sales Construction Engineering before his retirement, died on June 20; Clarence C. Clifton, 60, division superintendent in Louisiana Division before his retirement, died on July 29; Charles S. Croyle, 76, district construction foreman at London before his retirement, died on July 8; Charles F. Ditzenberger, 75, car repairman first at Baytown Refinery before his retirement, died on June 12; William C. Findeisen, 80, roustabout at Goose Creek before his retirement, died on June 2; William C. Lynch, 72, linewalker at May Station before his retirement, died on June 23; Elmick J. Parks, Sr., 65, gangpusher at Baytown Refinery before his retirement, died on July 28; Carl E. Rushing, 56, toolpusher at Avery Island, Louisiana before his retirement, died on July 9; Walter S. Shirley, 63, chief clerk at Baytown Refinery before his retirement, died on July 24; Celso Salazar, 64, laborer at Baytown Refinery before his retirement, died on June 19; Waldo E. Sojourner, 78, boiler repairman at Baytown Refinery before his retirement, died on July 22; John Winkler, 66, pumper at Gladewater before his retirement, died on July 4.

By the way . . .

British Lecturer at Baytown

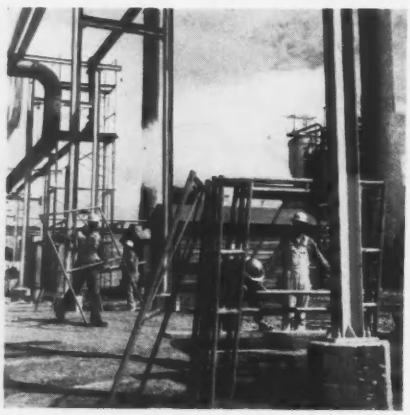
This year, the Humble Lectures in Science series spans the Atlantic Ocean to bring one of England's outstanding scientists to Baytown Refinery. He is Charles Kemball, Professor of Chemistry at Trinity College, Cambridge, who lectured during the week August 27-31 on "Adsorption and Catalysis."

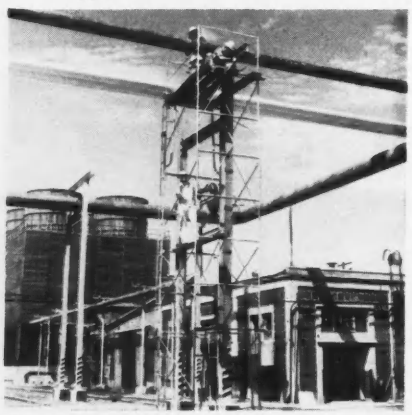
Dr. Charles Kemball

Professor Kemball received his education at Edinburgh Academy and Trinity College, Cambridge. After graduating with high honors from Trinity College in 1942, he continued his research in colloid science and received his Ph.D. in 1946. During the academic year 1946-47 he was a Commonwealth Fund Fellow at Princeton University. In 1949 he became a Fellow and Junior Bursar of Trinity College, Cambridge, and in 1951 he became a University Demonstrator in physical chemistry and Lecturer for Trinity College.

Professor Kemball is the author of a number of research papers on adsorption and catalysis. His appearance at Baytown is in keeping with the policy set by the Humble Lectures in Science program when it was established several years ago; namely, to keep refinery researchers abreast of the latest developments in their field.

New Portable Scaffold





Baytown Refinery is full of home-grown gadgets. Hardly a day passes without a new one being added. With all its tools and machinery, the plant is fertile soil for inventive ideas.

One idea to fall lately on good ground was this one for a portable scaffold. Made of detachable metal sections, it can be put up in 10 minutes to paint some high-perched pipe. Then it can be dismantled quickly and easily and taken to the next job. Lumber is saved, and so are man-hours building lumber scaffolds.

Thinking is hard work, but this idea, like other useful ones that reach full bloom, shows that people are still willing to think for at least three reasons: First, for the satisfaction of knowing "This is mine: I thought it up myself"; second, to make work easier; third, for money.

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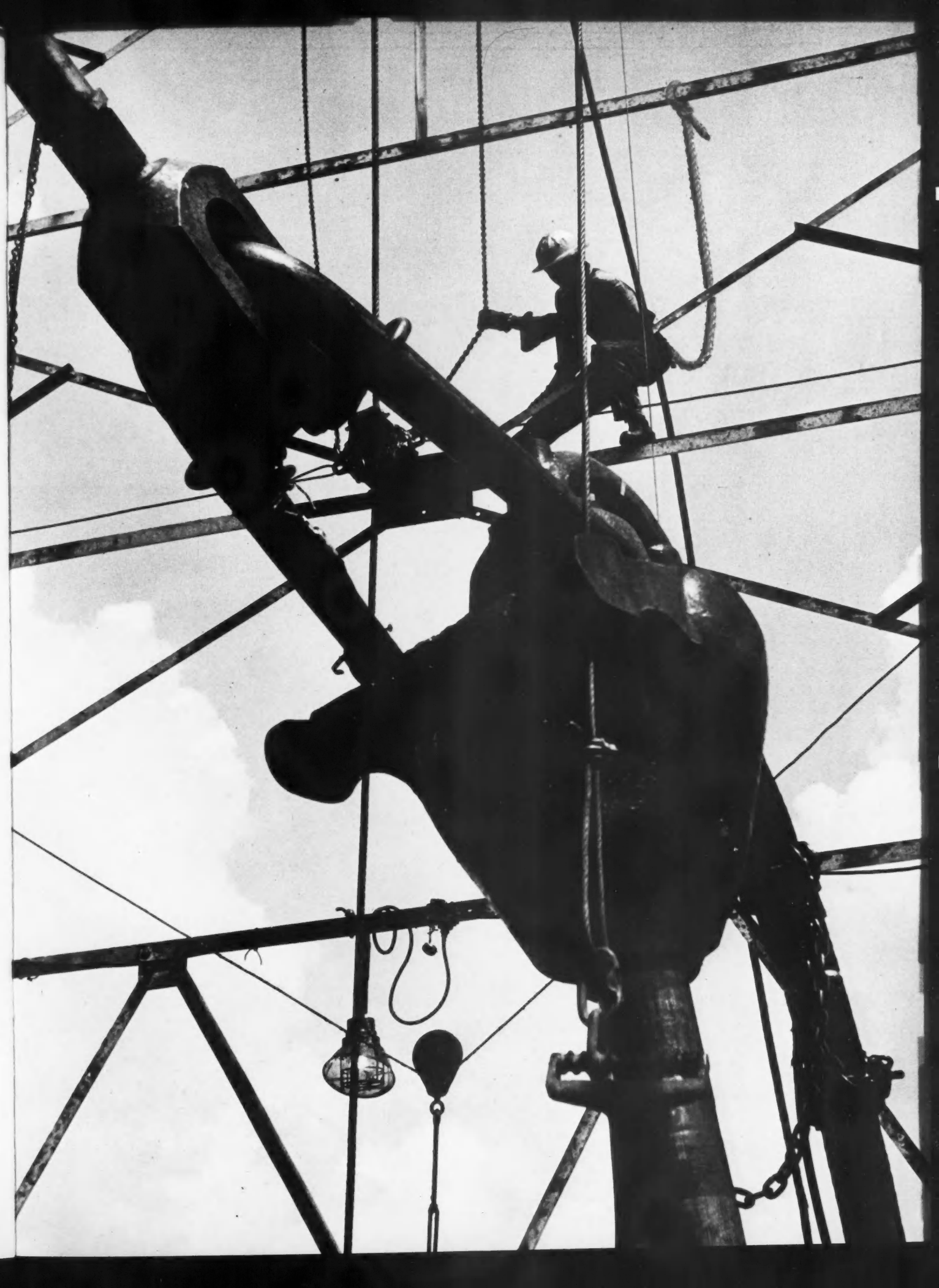
The Cover painting by E. M. Schiwetz shows where new Pipe Still No. 5 at Baytown Refinery fits into the plant pattern with other pipe stills.

Web of steel frames a heavy-duty swivel in this shot of derrickman inspecting drilling line guide.



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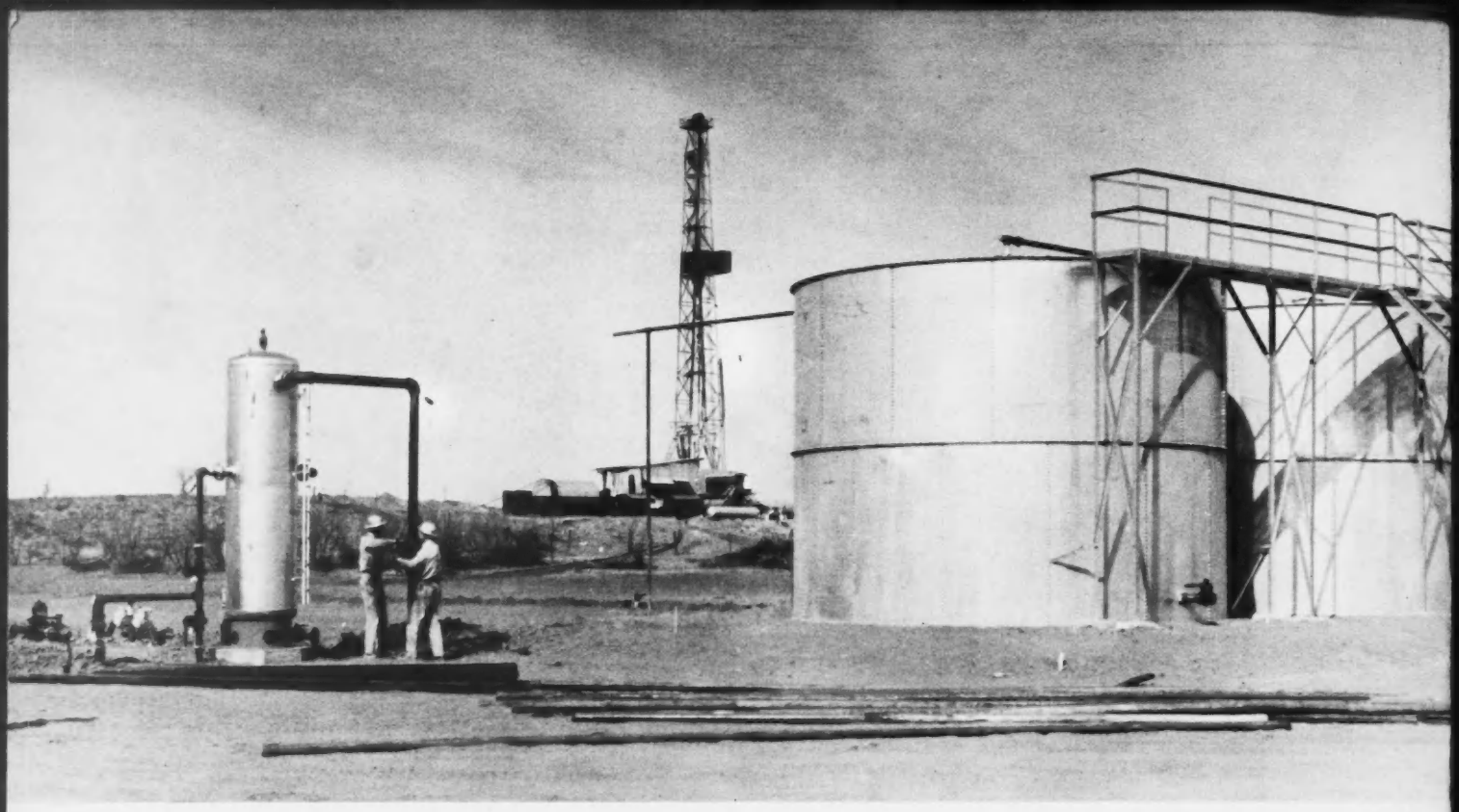
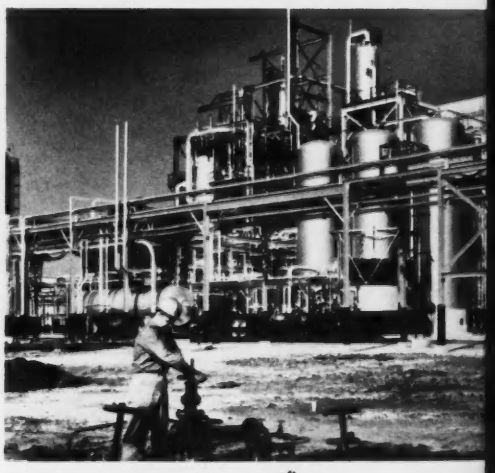


Investing Millions Today for More Oil Tomorrow

The American oil industry, always one to plow back a large part of its earnings into facilities for meeting future needs, will invest $4 billion this year to supply oil in future years. This means that in one year the industry is investing more than $100 for the average family of four people to meet our expanding oil needs.

Humble's capital expenditures in the first six months of 1951 were at an annual rate of $144 million, not including money spent on exploration and dry holes. In the six post-war years through 1951 Humble will have spent nearly $1 billion for finding and developing new production and for building facilities to transport, refine, and market crude oil and products for millions of customers.



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